THE TREATMENT OF INTERNATIONAL RESERVES BY UNDERDEVELOPED COUNTRIES AS RELATED TO THE CREATION OF A NEW FORM OF INTERNATIONAL RESERVES

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INTRODUCTION

In recent years economists and international monetary authorities have become increasingly concerned over the problems associated with the present international monetary system. Most serious students of the system agree that it has inherent weaknesses which should be eliminated, and they have extensively debated the question of how such a result could best be achieved. While complete agreement has not been reached, many theoreticians and policy makers favor the creation of a new type of international reserve asset. In fact, the Board of Governors of the International Monetary Fund (I.M.F.) are now in the process of voting on a proposed amendment to the I.M.F.'s Articles of Agreement which provides for the creation of a new form of international reserve asset to be distributed among its member countries on a noncontributory basis.[1]

If any new international reserve assets are purposely created through the International Monetary Fund or by other means, ownership of these assets must be obtained

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[1] Establishment of a Facility Based on Special Drawing Rights in the International Monetary Fund and Modifications in the Rules and Practices of the Fund, A Report by the Executive Directors to the Board of Governors Proposing Amendment of the Articles of Agreement (Washington: International Monetary Fund, April, 1968).

by individual countries before they can function as international reserves. This means that a decision as to how these reserve assets will be allocated among individual countries will be required. On the one hand, it is argued that such assets should be directly allocated only to the developed countries. On the other hand, it is argued that all countries should be direct recipients of these assets.

The allocation decision could be made on the basis of political and/or equity considerations. However, most plans to modify the international monetary system have been proposed as a means to achieve a more efficient system. Taking the achievement of a more efficient international monetary system as a desirable goal, this paper attempts to indicate whether this goal will be brought closer or removed further from attainment by the direct allocation of newly created reserve assets to the underdeveloped countries.

CHAPTER I

THE EVOLUTION OF THE PRESENT INTERNATIONAL MONETARY SYSTEM FROM THE PRE WORLD WAR I INTERNATIONAL GOLD STANDARD SYSTEM

The present international monetary system is the product of an evolutionary process which has been influenced by innumerable political, social, and economic forces. The features of the present system are the result of ad hoc adaptations and independent policy decisions of individual countries as well as numerous arrangements, agreements, and compromises among countries. The composite result of these many influences is a system which is neither simple nor very logical.

This chapter examines some of the major events and forces of this evolutionary process. Its purpose is to point out: (1) the basic vulnerability of the present international monetary system to speculative expectations of changes in exchange rates or the price of gold; (2) how this source of instability became embedded in the present system; and (3) some of the measures taken in the post World War II period to mitigate the effects of this instability. It is hoped that this emphasis will clarify the need for future efforts to reform the international monetary system to be directed at minimizing this vulnerability as well as

providing additional international reserves at an adequate rate.

The Pre World War I International Monetary System and the Evolutionary Process in the Interwar Period

Even though the forces involved in the evolutionary process have been many, following World War I the dominant force was the widespread desire among economists and governments for a "return to normalcy." It was generally considered that this return to "normal" would include a return to the international gold standard as it existed before the war. The efforts which were undertaken as a result of this desire to restore the international gold standard are primarily responsible for the establishment of the basic framework of the present international monetary system.

The prewar international monetary system reconstructed as a model

An international currency system based on an international gold standard had been established among the leading countries of the world, as well as many others, some 30 to 35 years preceding the outbreak of World War I. While this system experienced only a short life span, its appeal to some economists and monetary authorities as a solution to international payments problems has yet to die. Much of this appeal is undoubtedly due to (1) the fact that the pre World War I international monetary system did perform well and (2) the logical consistency of the models constructed to

describe how international adjustment took place within the framework of the international gold standard.

Arthur I. Bloomfield describes the performance of the prewar international monetary system as follows:

> During this period, extending from about 1880 to 1914, the exchange rates of the various gold standard countries moved within narrow limits approximating their respective gold points without the support of exchange restrictions, import quotas or related controls, which were virtually unknown even for currencies on paper or silver standard. Only a trifling number of countries were forced off the gold standard, once adopted, and devaluations of gold currencies were highly exceptional. Yet all this was achieved in spite of a volume of international reserves that, for many of the countries at least, was amazingly small and in spite of only a minimum of international cooperation, or of international agreements or commitments, on monetary matters. This remarkable performance, essentially the product of an unusually favorable combination of historical circumstances, appears all the more striking when contrasted with the turbulence of post-1914 international experience and remains, even today, a source of some measure of fascination and indeed of puzzlement to students of monetary affairs.[1]

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[1] Arthur I. Bloomfield, Monetary Policy Under the International Gold Standard: 1880-1914 (New York: Federal Reserve Bank, 1959), p. 9. Also see R. G. Hawtrey, The Gold Standard in Theory and Practice (3d ed.; London: Longmans, Green & Co., 1933); Dennis H. Robertson, "How Do We Want Gold to Behave?" The International Gold Problem, A Record of the Discussions of a Study Group of Members of the Royal Institute of International Affairs 1929-1931 (London: Oxford University Press, 1932), pp. 18-46; William Adams Brown, Jr., England and the New Gold Standard 1919-1926 (New Haven: Yale University Press, 1929), pp. 3-8; Benjamin M. Anderson, International Currency: Gold Versus Bancor or Unitas, An Address Delivered before the Chamber of Commerce of the State of New York, February 3, 1944 (New York: Economists' National Committee on Monetary Policy, 1944); R. G. Hawtrey, Monetary Reconstruction (2d ed.; London: Longmans, Green & Co., 1926), pp. 37-42; Fritz Machlup, International Payments, Debts, and Gold (New York: Charles Scribner's Sons, 1954), pp. 293-95; and Paul Einzig, Monetary Reform in Theory and Practice (New York: Macmillan Co., 1936), pp. 9-19, 25-26.

To explain just how the prewar international gold standard adjustment mechanism worked has been the subject of many efforts. Whether or not the international gold standard ever actually existed in its "textbook" form has been debated at some length as has the automaticity with which it was supposed to bring about balancing adjustments between countries engaged in international transactions.[2] Robert Triffin has presented one of the clearest explanations of how such an international gold standard mechanism is supposed to have worked:

> . . . the domestic volume of money escaped the control of national authorities and was determined automatically by international market forces. Monetary circulation was made up of gold and subsidiary coin; it expanded or contracted, not as a result of conscious monetary policy, but in accordance with the net movements of the international balance of payments. A favorable balance of payments brought gold into a country and expanded the circulating medium. An unfavorable balance produced the opposite effect.
>
> These movements were regarded as self-adjusting through their influence on national price and cost levels and on interest rates. International balance, if disturbed would be restored because of the effects of the ensuing domestic contraction or expansion on relative cost and interest levels at home and abroad and the resulting shifts in trade and capital movements. The automatic monetary

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[2]See Einzig, pp. 1-16; P. T. Ellsworth, The International Economy (3d ed.; New York: Macmillan Co., 1964), pp. 339-50; Brown, pp. 3-8; League of Nations, Secretariat, International Currency Experience (II.A.4) (1944), pp. 66-112; League of Nations, Report of the Gold Delegation of the Financial Committee (II.A.12) (Geneva, 1932), pp. 9-16; Roy Harrod, Reforming the World's Money (New York: St. Martins Press, 1965), pp. 161-65; A. G. Ford, The Gold Standard 1880-1914: Britain and Argentina (Oxford: Clarendon Press, 1962), pp. 30-49; Kenneth E. Boulding, The Economics of Peace (New York: Prentice Hall, 1946), p. 157; and Bloomfield, pp. 9-10, 47-51.

> contraction produced by gold exports would raise interest rates and attract capital from abroad. It would at the same time exert a downward pressure on domestic prices and costs, thus stimulating exports and discouraging imports. Both of these movements--capital and trade--would tend to correct the balance of payments deficit in which they originated. A surplus in the balance of payments would also be self-corrective. Gold imports would expand monetary circulation, lower interest rates, increase prices and costs, and stimulate capital exports and merchandise imports while discouraging exports. These processes would continue until foreign payments and receipts were again brought into balance.[3]

The international monetary disorder following World War I

The outbreak of hostilities in 1914 brought a quick end to the free export and import of gold in Europe. Subsequently, the exigencies of war proved to be fatal for the international gold standard. The exchange and trade controls, inflation, independent policy action, fluctuating exchange rates, and uncertainty all led to its collapse. However, the standard was not completely abandoned by many countries and the United States in particular maintained most of the legal aspects of its gold standard.

The financing of the war and of the postwar reconstruction resulted in sharp and inflationary increases

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[3]Robert Triffin, International Monetary Policies, Postwar Economic Studies No. 7 (Washington: Board of Governors of the Federal Reserve System, September, 1947), pp. 48-49. Also see Charles R. Whittlesey, International Monetary Issues (New York: McGraw-Hill Book Co., Inc., 1937), pp. 14-22; Michael A. Heilperin, International Monetary Reconstruction, National Economic Problems No. 407 (New York: American Enterprise Assoc., 1945), pp. 8-11; Einzig, pp. 10-13; and Hawtrey, Monetary Reconstruction, pp. 37-42.

in the money supplies of most of the countries involved.[4] This was especially true of Germany, Austria, Hungary, Poland, Russia, Italy, and France. The belligerent countries were unable to maintain convertibility, and the freely fluctuating exchange rates which existed in the following years

> . . . failed signally . . . to restore a competitive price and cost pattern among the major trading nations, to induce the adoption of monetary policies compatible with even a moderate degree of stability in prices and exchange rates, and to bring about any sort of tenable equilibrium in the world's balance of payments.[5]

In the early postwar years it was widely believed that the extensive depreciation of European currencies was a temporary phenomenon and ultimately these currencies would move upward to their prewar parities. As a result of such anticipations, any fall in the exchange value of such currencies was seen as providing a more profitable opportunity to invest in the money assets of the European countries. This led to equilibrating flows of capital. However, as the abnormally large import needs of the war-torn countries continued and the depreciation of their currencies continued, foreign investors and speculators became more and more wary of the one-way movement in exchange

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[4]Robert Triffin, The Evolution of the International Monetary System: Historical Reappraisal and Future Perspectives ("Princeton University Publications: Studies in International Finance," No. 12; Princeton: Princeton University Press, 1964), p. 21.

[5]Ibid.

rates. Eventually a reduction in their exchange rates lost its capital attracting ability and even came to result in speculation that the rates would decline further. When this point was reached, additional decreases in their exchange rates resulted in disequilibrating capital movements which further depressed the rates and set off more flights of capital.[6]

> Everywhere currency and exchange disorder is hampering trade and retarding construction. In some countries it is a prime factor amongst those which are causing a breakdown of the economic and social system. . . .[7]

Postwar recommendations for a return to the international gold standard

It was against a background of these conditions that the Council of the League of Nations in February, 1920, decided to convene a conference whose purpose was to investigate the financial crisis and to look for ". . . the means of remedying and of mitigating the dangerous consequences arising from it."[8] Professor Gustav Cassel, in his advisory memorandum to the conference members, stated:

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[6]League of Nations (II.A.4) (1944), pp. 113-22.

[7]League of Nations, Secretariat, Currencies after the War (London: Harrison & Sons, Ltd., 1920), p. ix.

[8]League of Nations, International Financial Conference, Proceedings of the Conference, I (Brussels, 1920), 3. Cited hereafter as League of Nations, Proceedings of the Conference, 1920.

> . . . it seems pretty sure that most countries look forward to the restoration of a gold standard and the resumption of gold payments as the real rescue from the hopeless muddle of the present paper-money system.[9]

That the statesmen at the conference were in agreement with Cassel on this subject is reflected in the following resolution which they adopted:

> It is highly desirable that the countries which have lapsed from an effective gold standard should return thereto.[10]

In mid 1920 the postwar demand had almost spent itself and the immediate postwar inflation reached a peak. By this time, however, policy efforts to restrict expansionary tendencies were well under way.[11] In the late summer of 1920 there was a sharp decline in world prices, especially in wholesale prices.[12] The only countries which avoided the deflation were those which experienced hyperinflation.[13]

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[9] Gustav Cassel, Memorandum on the World's Monetary Problems, Prepared for the League of Nations (XIII, 3) (Brussels, 1920), p. 34. Also see A. C. Pigou, Memorandum on Credit, Currency, and Exchange Fluctuations, Prepared for the League of Nations (XIII, 4) (Brussels, 1920), p. 10 and M. Pantaleoni, Memorandum Prepared for the International Financial Conference at Brussels, For the League of Nations (XIII, 6) (Brussels, 1920), p. 7.

[10] League of Nations, Proceedings of the Conference, 1920, pp. 19-20.

[11] The Federal Reserve Bank of New York, for example, raised the rate on 90-day commercial paper to 7 percent. William Adams Brown, Jr., The International Gold Standard Reinterpreted, 1914-1934, I, No. 37 (New York: National Bureau of Economic Research, Inc., 1940), 244.

[12] John Parke Young, The International Economy (4th ed.; New York: Ronald Press Co., 1963), p. 716.

[13] Milton Friedman and Anna Jacobson Schwartz, A Monetary History of the United States 1867-1960 (Princeton: Princeton University Press, 1963), p. 236.

The postwar depression came to an end in late 1921 or early 1922.[14]

In 1922, following the waves of postwar inflation and deflation, the Genoa Conference was convened. While the scope of the conference was quite broad, the urgency of financial stability was made apparent by the establishment of a Financial Commission to deal with this single subject. The following was among the resolutions adopted by the Financial Commission:

> It is in the general interest that European Governments should declare now that the establishment of a gold standard is their ultimate object, and should agree on the programme by way of which they intend to achieve it.[15]

This expression of faith in the international gold standard is not surprising considering the attitudes of the day. The overall purpose of the Genoa Conference was to reestablish and maintain peace and stability in the world, and the international gold standard was associated with the prewar economy and evoked visions of serene economic progress, relative peace, and freedom from government regulation. Furthermore, the theoretical model of the international gold standard seemed to provide a logical justification for this association. Even though the model described a pure and unadulterated form of the international

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[14] Ibid., p. 239. Also see Brown, The International Gold Standard . . . , I, 250-54.

[15] John Saxon Mills, The Genoa Conference (New York: E. P. Dutton & Co., 1922), pp. 361-62.

gold standard which never existed, it still exerted a strong influence on the international monetary system which evolved in the 1920's. The value of the model was not to be found

> . . . in its descriptive realism, but in the fact that it inspired so much of the academic thinking and legislative controversies regarding national and international monetary mechanisms during the nineteenth and even the twentieth century.[16]

The gold exchange standard of the 1920's: an attempt to economize gold

While the delegates at Genoa gave their approbation to gold as one of the stabilizing influences needed by the world, they were concerned over the possibility that a scramble for gold might result if most countries began absorbing gold in attempting to reattain such a standard. Fearing a sharp rise in the price of gold as the result of such a scramble, the members of the Financial Commission recommended the establishment of a gold-exchange standard which they thought would economize gold. This economy was to be achieved by having some central banks hold claims on foreign currencies convertible into gold instead of gold itself as part of their international reserves.

The members of the Financial Commission also recommended that an "international Convention" be adopted.

> The purpose of the Convention would be to centralize and co-ordinate the demand for gold, and so to avoid those wide fluctuations in the purchasing power of

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[16]Triffin, International Monetary Policies, p. 49.

> gold, which might otherwise result from the simultaneous and competitive efforts of a number of countries to secure metallic reserves. The Convention should embody some means of economizing the use of gold by maintaining reserves in the form of foreign balances, such, for example, as the gold-exchange standard, or an international clearing system.[17]

While such a "Convention" was never adopted,[18] the recommendation that an international gold-exchange standard be established was fulfilled during the middle 1920's as an increasing number of countries restored their own currencies and began to hold claims on other currencies which were convertible into gold as part of their international reserves. Since different countries adopted the gold-exchange standard at various times, no specific year can be identified as the point at which such a standard began to emerge as a component of the international monetary system.[19] However, the gold

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[17]Mills, p. 363. Also see Hawtrey, Monetary Reconstruction, pp. 122-38.

[18]Dean E. Traynor, "International Monetary and Financial Conferences in the Interwar Period," Studies in Economics, XXIII (published dissertation, The Catholic University of America; Washington: The Catholic University of America Press, 1949), 143.

[19]For example, the central banks of these countries were legally allowed to hold all of their reserves in short-term claims on foreign currencies which were convertible into gold in the year designated: Austria (1922), Danzig (1923), Hungary (1924), Bulgaria (1926), Estonia (1927), and Greece (1928). League of Nations (II.A.4) (1944), p. 30.

Legislation was passed allowing a large number of other countries to hold part of their legal reserves in claims on foreign currencies in the period between 1922-1931. Among these were Albania, Belgium, Bolivia, Chile, Columbia, Czechoslovakia, Denmark, Ecuador, Egypt, Italy, Latvia, Peru, Poland, Portugal, Romania, Spain, Uruguay, U.S.S.R., and Yugoslavia. League of Nations (II.A.4) (1944), p. 30.

exchange standard gained wide acceptance during the late 1920's.[20]

In the interwar period as today, central bankers were disinclined to leave the adjustment process to the "automatic" mechanism of the gold standard. Indeed in the late 1920's the gold-exchange standard increasingly became a manipulated standard.[21] Triffin points out that the most significant development concerning the international monetary system in the 1920's was that domestic considerations became more and more ". . . the final determinant of monetary policies."[22]

> Factors of a purely domestic nature also tended to shape monetary developments in a manner totally alien both to the classical gold standard mechanism and to its "rules of the game" interpretation. . . . Central bank powers were no longer used to transmit automatically to the domestic economy the upward or downward pressures of surpluses or deficits in the balance of payments, regardless of national policy objectives. On the contrary, central banking policies came to be defined less and less with reference to the state of the gold reserves or the prerequisites of international balance, and more and more in terms of domestic price stability, the promotion of fuller employment, etc.[23]

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[20] In 1928 foreign exchange constituted 42 percent of the total of foreign exchange and gold reserves held by European central banks. League of Nations (II.A.4) (1944), p. 35. Also see Brown, The International Gold Standard . . . , I, 732-34.

[21] Feliks Mlynarski, The Functioning of the Gold Standard, A Memorandum Submitted to the Gold Delegation of the Financial Committee, League of Nations (Geneva, 1931), pp. 13-16.

[22] Triffin, International Monetary Policies, p. 33.

[23] Ibid., pp. 53-54.

While it would be erroneous to imply that the prewar gold standard was entirely unmanaged,[24] this change in emphasis did become quite apparent in the latter 1920's.[25]

The deterioration of the interwar gold-exchange standard

Gold-exchange standards are particularly vulnerable to the speculative flights of capital which are almost invariably set off when those holding a particular type of fiduciary reserve asset begin to doubt that the value of that asset can be maintained vis-à-vis other fiduciary or commodity reserve assets. The monetary disturbances of the 1930's as well as the post World War II problems which have

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[24]See Bloomfield, pp. 27-59 and Mlynarski, p. 16.

[25]See Francis Cassell, Gold or Credit? (New York: Frederick A. Praeger, 1965), pp. 18-23 who said "It is this weakening of the link between domestic policy and the external balance that the crucial distinction lies between the gold-exchange standard of the 1920's (and its successors) and the old gold standard." Also see Brown, The International Gold Standard . . . , I, 257-77, 672-75; League of Nations (II.A.4) (1944), pp. 66-88; Gustav Cassel, Money and Foreign Exchange After 1914 (New York: Macmillan Co., 1922), pp. 79-100; Edwin W. Kemmerer, Gold and the Gold Standard (New York: McGraw-Hill Book Co., Inc., 1944), pp. 118-20; and Gustav Cassel, Post-War Monetary Stabilization (New York: Columbia University Press, 1928), pp. 69-100.
". . . the change is radical, and our post-War gold standard is in reality quite a different thing from what we had before the War. The essence of the old gold standard was that the currency of a country was connected with the metal gold and that thereby its value was fixed in terms of gold. . . . By being connected with gold, the monetary standard ceased to be a standard that could in any way be 'managed.'. . . All this has disappeared. We now know that the value of gold can be controlled by a suitable regulation of the world's monetary demand for gold. . . . Our ultimate purpose is now to give our currency a fixed value in terms of commodities." Cassel, Post-War Monetary Stabilization, pp. 69-70.

resulted from capital flights indicate the seriousness of this instability. The following is a brief summary of the events to which this basic vulnerability contributed in the 1930's.

One of the first tangible occurrences which led to the downfall of the international gold-exchange standard of the 1930's was the Credit Anstalt affair.[26] Faced with the failure of the Credit Anstalt, whose assets and liabilities were equal to over 70 percent of those for all Austrian banks, the Austrian government stepped in but was only able to relieve the crisis temporarily. Worse still, this action led the public to associate the financial condition of the Credit Anstalt with that of the Austrian government. Foreigners seeking safety for their funds set off large-scale flights of capital from Austria. The Austrian government imposed exchange controls in October, 1931.[27]

The loss of confidence resulting from the Credit Anstalt failure soon spread to Germany and capital outflows

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[26]The Credit Anstalt was primarily a holding company for the Rothschild enterprises. Established before the war, the Credit Anstalt found that the market area of its enterprises was severely limited with the destruction of the Austro-Hungarian customs union. When the great depression of the late 1920's became more severe, the Credit Anstalt's financial position weakened considerably and public disclosure of its condition brought runs on that institution. Brown, The International Gold Standard . . . , I, 925-26.

[27]Leland B. Yeager, International Monetary Relations, Theory, History, and Policy (New York: Harper & Row, 1966), pp. 295-96.

resulted. The Reichsbank raised its discount rate from 5 to 7 percent and obtained a $100 million loan from the Bank of International Settlements, England, France, and the United States. In June of 1931 the Hoover moratorium[28] postponed payments on war debts and reparations. It was not enough to halt the bank runs in Germany nor the flight from the mark. A bank holiday was declared on July 14, and by the end of July exchange controls were introduced. In August the so-called standstill agreement immobilized the funds owed by Germans to foreign banks.[29]

Initially, the flight from the mark resulted in a gold flow into London. The situation soon reversed itself however; and when the Macmillan Report[30] was published in July, 1931, which showed net short-term claims held by foreigners on London to be about £254 million, confidence in the pound was severely shaken.[31] The gold flow from

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[28]Herbert Hoover, The Memoirs of Herbert Hoover: The Great Depression 1929-1941 (New York: Macmillan Co., 1952), pp. 67-72.

[29]Frank C. Child, The Theory and Practice of Exchange Control in Germany (The Hague: Martinus Nijhoff, 1958), pp. 15-29. Also see Gustav Stolper, The German Economy 1870-1940 (New York: Reynal & Hitchcock, 1940), pp. 190-93 and H. Schumacher, "Germany's Present Currency System," The Lessons of Monetary Experience, ed. A. D. Gayer (New York: Farrar & Rinehart, 1937), pp. 214-22.

[30]Great Britain, Parliamentary Papers, Cmd. 3897, June, 1931, "Report of the Committee on Finance and Industry," p. 112. Cited hereafter as Great Britain, Parliamentary Papers, Cmd. 3897. (This report is generally referred to as the Macmillan Report.)

[31]The Committee did not expect their report to result in a loss of confidence, but to the contrary they had

England was stanched by increases in the bank rate and announcements of credit arrangements of £25 million from both France and the United States. However, lack of confidence in the value of the pound was soon renewed by the political unrest and the resignation of the Labour government which followed the publication of a Parliamentary study on national expenditures.[32] The National coalition government which subsequently came to power was almost immediately granted credits of over £80 million by France and the United States. The measure worked only temporarily and in early September of 1931 rumors of unrest in the British Navy touched off new waves of speculation which exhausted nearly all of England's foreign credits and resulted in some gold outflow. This turned out to be the fatal blow. On September 21 the Gold Standard Amendment Act of 1931 was passed and the gold-exchange standard was officially suspended in England.[33]

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the following to say about the net liability figures: "We were prepared to find that these totals might give some support to the fears expressed above, but in fact they are reassuring." Great Britain, Parliamentary Papers, Cmd. 3897, p. 112. Also see Paul Einzig, World Finance 1914-1935 (New York: Macmillan Co., 1935), pp. 224-31.

[32]Great Britain, Parliamentary Papers, Cmd. 3920, 1931, "Report of the Committee on National Expenditure," pp. 215-24. (It is often cited as the May Committee.)

[33]Great Britain, Laws, Statutes, etc. 1910-1936, Geo. V, Vols. XXI-XXII, c. 46 (1931). Also see Albert E. Feavearyear, The Pound Sterling: A History of English Money (2d ed. rev. by E. Victor Morgan; London: Oxford University Press, 1963), p. 368 and Walter A. Morton, British Finance 1930-1940 (Madison, Wis.: University of Wisconsin Press, 1943), pp. 57-71.

When Great Britain abandoned the gold standard in September of 1931, both foreign central banks and private holders began to convert their holdings of U.S. dollar assets to gold. Between the first of September and the end of October, the United States' gold reserves fell from their previous all-time high of $4.6 billion to $3.9 billion.[34] The contractionary effects of these outflows of gold were accentuated by the hoarding of currency and gold in the United States. The Federal Reserve's response to the situation was primarily directed at preserving the gold standard. Discount rates were increased, and Federal Reserve Bank credit outstanding was only $1.8 billion at the end of February, 1932, as compared to $2.1 billion at the end of October, 1931, in spite of the continuing depression.[35]

However, in March, 1932, the Federal Reserve embarked upon an easy money policy and by December had increased their holdings of government securities by

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[34]Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, XVIII, No. 3 (March, 1932), 167.

[35]Ibid., p. 149. Also see Elmus R. Wicker, Federal Reserve Monetary Policy 1917-1933 (New York: Random House, 1966), pp. 163-71. This contraction took place even though the ratio of gold held by the Federal Reserve to its note and deposit liabilities was well above the legal minimum. The problem was that the original Federal Reserve Act required that collateral be held against the Federal Reserve notes on a dollar for dollar basis and that the only acceptable collateral was gold and commercial paper discounted by borrowing banks. The Federal Reserve Act (Approved December 23, 1913), as Amended to March 4, 1931 (Washington, 1931), pp. 37-44.

$1,115 million.[36] By the beginning of 1933 there was hope that the financial conditions in the United States were at last beginning to improve. But when the Union Guardian Trust Company of Detroit experienced heavy runs and failure seemed imminent, an eight-day bank holiday was declared in Michigan. This touched off runs on other banks and ultimately led to the declaration of a four-day national bank holiday on March 6th. Banks were forbidden to pay out any coin, bullion, or currency, or to carry on any banking business other than that approved by the Secretary of the Treasury.[37]

Even though the banking panic had subsided by the middle of March, it was announced on April 19, 1933 that no

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[36] Lester V. Chandler, The Economics of Money and Banking (4th ed.; New York: Harper & Row, 1964), p. 506. Also see Wicker, pp. 177-84.

In February, 1932, the Glass-Steagall Act was passed which permitted the Federal Reserve to use government securities as collateral for Federal Reserve Notes for the first time. The Federal Reserve Act (Approved December 23, 1913), as Amended to July 1, 1933 (Washington, 1933), pp. 69-76.

[37] Bank Holiday, March 6-9, 1933, Inclusive, Proclamation No. 2039, in U.S., Statutes at Large, XLVIII, Part 2, 1689-91. Also see William Adams Brown, Jr., The International Gold Standard Reinterpreted, 1914-1934, II, No. 37 (New York: National Bureau of Economic Research, Inc., 1940), 1249-52; Friedman and Schwartz, pp. 399-419; Yeager, pp. 301-304; Hoover, pp. 196-216; Paul Studenski and Herman E. Kroess, Financial History of the United States (2d ed.; New York: McGraw-Hill Book Co., Inc., 1963), pp. 376-81; and U.S., President (F. D. Roosevelt), Order Forbidding Hoarding of Gold Coin, Gold Bullion, and Gold Certificates, April 5, 1933, Executive Order No. 6102.

further gold licenses would be granted[38] and almost immediately the exchange rate of the dollar fell sharply. This action marked the unequivocal departure of the United States from the gold standard.[39]

Even after the de facto devaluation by the United States in 1933 several countries remained tied to gold. Most notable among these so-called "gold-bloc" countries were France, Italy, Switzerland, Belgium, and Holland. After 1931 the currencies of the gold-bloc countries came to be overvalued and, consequently, they found it more difficult to sell to the rest of the world. But these countries were doggedly determined to maintain the gold parity of their currencies. Their citizens associated devaluation with the currency problems of the war and recent postwar period and generally felt that devaluation had to be avoided if the value of their products, incomes, and savings was to be maintained. Because of the political unpopularity of devaluation, severe deflationary measures were instituted in the gold-bloc countries to eliminate the growing deficits in their current accounts. In general,

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[38] Twentieth Annual Report of the Board of Governors of the Federal Reserve System for the Year 1933 (Washington: U.S. Government Printing Office, 1934), pp. 2-3.

[39] This is not to imply, however, that the United States was forced to leave the gold-exchange standard as Great Britain was. "This was a voluntary action and took the United States off the international gold standard." Brown, The International Gold Standard . . . , II, 1255. Yeager also pointed out: "The departure from gold was deliberate." Yeager, p. 305.

these policies proved to be unsuccessful and were certainly inadequate to eliminate their overall balance-of-payments deficits once the value of their currencies became suspect and capital flights began.[40]

As a result, all of the gold-bloc countries were ultimately forced to devalue. Belgium was the first to take such a step in 1935.[41] France suspended its 1928 gold standard law in October of 1936 though for all practical purposes she had devalued in September. However, France's devaluation did not prove to be large enough. In June, 1937, the French government cut the franc from any definite support limits.[42] The franc was stabilized at 42 percent of its mid-1936 value in May of 1938 where it remained until World War II.[43]

Holland and Switzerland devalued within days of the September de facto devaluation of the French franc. Germany, on the other hand, did not overtly devalue. However, Germany already was making use of multiple exchange

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[40]See Paul Einzig, World Finance 1935-1937 (New York: Macmillan Co., 1937), pp. 27-100; Yeager, pp. 312-20; Young, pp. 742-46; Brinley Thomas, Monetary Policy and Crises: A Study of Swedish Experience (London: George Routledge & Sons, Ltd., 1937), pp. 157-86; and John Donaldson, The Dollar: A Study of the "New" National and International Monetary System (London: Oxford University Press, 1937), pp. 164-209.

[41]Henry L. Shepherd, The Monetary Experience of Belgium, 1914-1936 (Princeton: Princeton University Press, 1936), pp. 205-10.

[42]Yeager, p. 319.

[43]Ibid., p. 320.

rates and extensive exchange controls. In the late 1930's these controls became more restrictive and comprehensive.[44]

The international monetary system which had thus evolved by the end of the 1930's bore very little resemblance to the pre World War I system.[45] Great Britain had departed from gold and was relying on its Exchange Equalization Account to stabilize the exchange rate of the pound. The sterling area had come to be primarily composed of members of the Empire. The United States had gone to a type of managed gold standard without domestic convertibility, and the "golden avalanche" had brought the United States almost 60 percent of the world's monetary gold stock by 1938.[46] France, after experiencing great exchange rate fluctuations in the interwar period, had managed to stabilize the franc at 8 1/2 percent of its pre World War I gold value. However, the French Exchange Stabilization Fund attempted to peg the franc to the pound sterling, not gold. The other gold-bloc countries had either left gold completely, imposed exchange restrictions, and/or

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[44]See Gustav Stopler, The German Economy 1870 to the Present, trans. Toni Stopler (New York: Harcourt, Brace & World, 1967), pp. 143-50.

[45]See Gustav Cassel, The Downfall of the Gold Standard (Oxford: Clarendon Press, 1936), pp. 112-34, 212-29.

[46]See U.S., Statutes at Large, XLVIII, Part 1, 1-8; Frank D. Graham and Charles R. Whittlesey, Golden Avalanche (Princeton: Princeton University Press, 1939), pp. 41-66; Twenty-Third Annual Report of the Board of Governors of the Federal Reserve System for the Year 1936 (Washington: U.S. Government Printing Office, 1937), pp. 8-10; and Donaldson, pp. 50-53.

devaluated sharply. By 1939 Germany had resorted to multiple exchange rates, rigid exchange controls, and various forms of bilateral clearing and payments agreements in attempting to exploit monopoly and monopsony positions in the international market. This was the general condition of the world monetary system when World War II brought governmental controls over international and domestic financial transactions to the major countries of the world which were unprecedented in their effective application and comprehensiveness.

The Evolution of the International Monetary System Since World War II

Early postwar plans to reconstruct the international monetary system

After the rigors of war many countries lacked the inclination to undergo the monetary discipline which a return to the orthodox gold standard would entail.[47] It is not surprising that, except in certain American circles,[48] a return to the traditional or orthodox gold standard was generally not envisaged. Nevertheless, it was generally recognized that international monetary developments must not be allowed to become as chaotic and restrictive as they were during the interwar and war periods. Many proposals dealing with how the international monetary system should be modified or reestablished were put forward after

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[47] John H. Williams, Postwar Monetary Plans and Other Essays (3d ed.; New York: Alfred A. Knopf, 1947), pp. 22-41.

[48] See Anderson, pp. 7-15.

the war. Only two of these plans will be mentioned here: (1) the so-called White proposal because it was adopted in modified form, and (2) the so-called Keynes plan because numerous plans to reform the international monetary system which are currently being proposed are essentially the Keynes plan with modifications of details.

While these plans are similar in some respects,[49] the Keynes plan[50] called for the establishment of an International Clearing Union whose operations would be carried out in a new form of international reserve asset called bancor. This plan would make use of the overdraft principle whereby a deficit country could obtain bancors by overdrawing its account with the Union. Other countries would supposedly accept the bancors thus created in settlement of obligations due them by the overdrafting country.[51]

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[49] Jacob Viner, "Two Plans for International Monetary Stabilization," The Yale Review, XXXIII, No. 1 (1943), 75-107.

[50] Great Britain, Parliamentary Papers, Cmd. 6437, April, 1943, "Proposals for an International Clearing Union," pp. 1-20, cited by Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, XXIX, No. 6 (June, 1943), 507-21. Cited hereafter as Great Britain, Parliamentary Papers, Cmd. 6437, April, 1943. This proposal was prepared by a group of English monetary experts of which John Maynard Keynes was the most prominent.

[51] This plan would supposedly establish an institution whose solvency would be protected much like that of a monopoly bank in a country in which demand deposits constituted the only money. "The idea underlying such a Union is simple, namely to generalise the essential principle of banking as it is exhibited within any closed system. This principle is the necessary equality of credits and debits. If no credits can be removed outside the clearing system, but only transferred within it, the Union

The potential volume of bancors would supposedly increase over time since each country's overdraft privilege would automatically be expanded in reference to a moving average of its volume of trade.

On the other hand, the White plan[52] called for the establishment of a Fund into which member countries would initially pay an agreed upon amount of gold and their own currencies. The Fund would then, under prescribed conditions,[53] lend a member country foreign currency in exchange for its currency. The Fund would thus act as a financial intermediary between deficit and surplus countries

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can never be in any difficulty as regards the honouring of cheques drawn upon it. It can make what advances it wishes to any of its members with the assurance that the proceeds can only be transferred to the clearing account of another member." Great Britain, Parliamentary Papers, Cmd. 6437, April, 1943, p. 6.

[52]U.S., Treasury Department, Preliminary Draft Outline of a Proposal for an International Stabilization Fund of the United and Associated Nations, April 7, 1943, reprinted by Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, XXIX, No. 6 (June, 1943), 501-507. Harry Dexter White, then Assistant to the Secretary of the Treasury, was primarily responsible for the preparation of this memorandum. White had authored a similar memorandum in 1941. See U.S., Treasury Department, Proposal for a Stabilization Fund of the United and Associated Nations, December, 1941.

[53]The Fund would sell foreign exchange to deficit countries for their currencies if it thought the country had or was implementing balance-of-payments policies which the Fund thought were appropriate or if in the Fund's judgment "it is believed that the balance of payments of the country whose currency is acquired by the Fund will be such as to warrant the expectation that the excess currency holdings of the Fund can be disposed of within a reasonable time." U.S., Treasury Department, Preliminary Draft Outline of a Proposal for an International Stabilization Fund of the United and Associated Nations, rev. July 10, 1943, p. 9.

but would possess no facility through which additional international reserve assets could be created.[54]

The original White memorandum was modified in March, 1942, to include a provision whereby the Fund would lend to countries for postwar reconstruction and development.

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[54]This plan proposed no significant departure from the managed gold-exchange standard. As Professor John H. Williams noted, the White plan tried ". . . to preserve as much as possible the previous role of gold." John H. Williams, "Currency Stabilization: The Keynes and White Plans," Foreign Affairs (July, 1943), p. 650. For a more detailed discussion of these and other postwar plans for international monetary stabilization see Edward M. Bernstein, "A Practical Monetary Policy," American Economic Review, XXXIV, No. 4 (December, 1944), 771-84; Imré De Vegh, "The International Clearing Union," American Economic Review, XXXIII, No. 3 (September, 1943), 534-56; Frank D. Graham, Fundamentals of International Monetary Policy ("Essays in International Finance," No. 2; Princeton: Princeton University Press, Autumn, 1943); Friedrich A. Lutz, International Monetary Mechanisms: The Keynes and White Proposals ("Essays in International Finance," No. 1; Princeton: Princeton University Press, July, 1943); Louis Rasminsky, "International Credit and Currency Plans," Foreign Affairs, XXII, No. 4 (July, 1944), 589-603; Dennis H. Robertson, "The Postwar Monetary Plans," The Economic Journal, LIII, No. 212 (December, 1943), 352-60; Joan Robertson, "The International Currency Proposals," The Economic Journal, LIII, No. 210 (June-September, 1943), 161-75; Harry Dexter White, "Postwar Currency Stabilization," American Economic Review, XXXIII, No. 1, Supplement Part II (March, 1943), 382-87; John Maynard Keynes, "The Objectives of International Price Stability," The Economic Journal, LIII, No. 210 (June-September, 1943), 185-87; George N. Halm, International Monetary Cooperation (Chapel Hill, N. C.: University of North Carolina Press, 1945); Sidney E. Rolfe, Gold and World Power (New York: Harper & Row, 1966), pp. 58-86; Seymour E. Harris, John Maynard Keynes (New York: Charles Scribner's Sons, 1955), pp. 173-81; John Parke Young, "Developing Plans for an International Monetary Fund and a World Bank," Department of State Bulletin, XXIII, No. 593 (November 13, 1950), 778-90; Williams, Postwar Monetary Plans . . . , pp. 1-60; and J. H. Riddle, British and American Plans for International Currency Stabilization, Occasional Paper No. 16 (New York: National Bureau of Economic Research, December, 1943).

It would also extend credit and make investments in countries suffering from depression.[55] This addition to the original proposal was soon dropped for reasons explained in the introductory statement of a draft made public April 7, 1943:

> It is recognized that an international stabilization fund is only one of the instrumentalities which may be needed in the field of international economic cooperation. Other agencies are also needed to provide capital for postwar reconstruction and development, to provide funds for rehabilitation and relief and to promote stability in the prices of primary international commodities. There is a strong temptation to embrace within a single international agency the responsibility for dealing with these and other international economic problems. We believe, however, that international economic institutions can operate more effectively if they are not burdened with important but extraneous duties for which they have not been devised and for which they are unsuited. For example, the highly specialized nature of international monetary stabilization and the provision of long-term capital would seem to call for separate institutions, each designed to deal with its distinct problems.[56]

The International Monetary Fund: institutionalized support of the international gold-exchange standard

In July, 1944, a plan to create a new financial institution, fundamentally similar to that suggested in the

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[55] U.S., Treasury Department, Preliminary Draft Proposal for United Nations Stabilization Fund and a Bank for Reconstruction and Development, March, 1942.

[56] U.S., Treasury Department, Preliminary Draft Proposal for a Stabilization Fund of the United and Associated Nations, April 7, 1943, pp. 2-3.

In November, 1943, the U.S. Treasury Department did publish a separate proposal entitled Preliminary Draft Outline of a Proposal for a Bank for Reconstruction and Development of the United and Associated Nations, November 24, 1943.

White plan, was agreed upon by the representatives of 45 nations.[57] The International Monetary Fund which was subsequently established is a pool of national currencies from which member nations may draw certain amounts of foreign currencies in exchange for their own currencies.[58] The I.M.F. obtained its original pool of national currencies and gold through the quota subscriptions of member countries. The member countries were required to pay 25 percent of their quota in the form of gold and 75 percent in the form of their own currencies. Under present I.M.F. policy a drawing by a member which does not raise the Fund's holdings of that country's currency above the amount of its quota is granted almost automatically. This is referred to as the "gold tranche" drawing right since it represents that part of the quota which is subscribed in gold. If the member is making "reasonable" efforts to overcome its payments problems, the Fund generally adopts a liberal attitude toward drawings of an additional 25 percent of the member's quota which is termed the "first credit tranche." For drawings in the "high tranches"

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[57] U.S., Treasury Department, Articles of Agreement: International Monetary Fund and International Bank for Reconstruction and Development, United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 1 to 22, 1944. Stated hereafter as U.S., Treasury Department, Articles of Agreement. . . .

[58] Ibid.

> . . . the Fund expects the member to make intensive efforts to overcome its difficulties, usually through a comprehensive program of fiscal and monetary measures.[59]

The use of the funds acquired through I.M.F. drawings is also restricted. An interpretation of the Articles of Agreement held

> . . . that the resources of the Fund are to be used to give temporary assistance to members in financing balance of payments deficits on current account, and this was understood to include assistance in connection with seasonal, cyclical, and emergency fluctuations in the balance of payments.[60]

While later rulings did declare that drawings from the Fund could be used to meet deficits which were largely attributable to capital movements,[61] it has always remained clear that the Fund's resources are not to be used for capital development, reconstruction, reparations, or to acquire and hold foreign exchange reserves.[62]

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[59] International Monetary Fund and the International Bank for Reconstruction and Development, "Introduction to the Fund," The Fund and Bank Review: Finance and Development, I, No. 1 (June, 1964), 8.

[60] J. Marcus Fleming, The International Monetary Fund, Its Form and Functions (Washington: International Monetary Fund, 1964), p. 30. Also see International Monetary Fund, "Pursuant to Executive Board Decision No. 71-2, September 26, 1946," Selected Decisions of the Executive Directors (2d ed.; Washington: International Monetary Fund, September, 1963), p. 53.

[61] International Monetary Fund, "Decision No. 1238-(61/43)," Selected Decisions of the Executive Directors (2d ed.; Washington: International Monetary Fund, September, 1963), p. 55. Also see Per Jacobsson, International Monetary Problems 1957-1963 (Washington: International Monetary Fund, 1964), pp. 247, 285.

[62] U.S., Treasury Department, Articles of Agreement . . . , art. XIV, sec. 1, p. 29.

For a more detailed description of the origin of the I.M.F., its original form, objectives, and policies also see

Even though the I.M.F. was established on the basis of stable exchange rates, the Articles of Agreement provided

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the following: Harry Dexter White, "The Monetary Fund: Some Criticisms Examined," Foreign Affairs, XXIII, No. 2 (January, 1945), 194-210; John Parke Young, "Conference at Bretton Woods Prepares Plans for International Finance," Department of State Bulletin, XI, No. 280 (November 5, 1944), 539-50; U.S., Department of State, International Organization and Conference Series 1, 3, Proceedings and Documents of the United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 1-22, 1944, Department of State Publication No. 2866, Vols. I-II, 1948, cited hereafter as U.S., Department of State, Proceedings and Documents of the United Nations . . . ; Alvin H. Hansen, America's Role in the World Economy (New York: W. W. Norton & Co., Inc., 1945), pp. 48-90; Lutz, passim; Ragnar Nurkse, Conditions of International Monetary Equilibrium ("Essays in International Finance," No. 4; Princeton: Princeton University Press, Spring, 1945); E. A. Goldenweiser and Alice Bourneuf, "Bretton Woods Agreements," Federal Reserve Bulletin, XXX, No. 9 (September, 1944), 850-70; Halm, passim; Henry Morgenthau, Jr., "Bretton Woods and International Cooperation," Foreign Affairs, XXIII, No. 2 (January, 1945), 182-94; J. B. Condliffe et al., "A Symposium on the International Monetary Fund and International Bank for Reconstruction and Development Proposed at Bretton Woods," Review of Economic Statistics, XXVI, No. 4 (November, 1944), 165-93; Dean Acheson, "The Bretton Woods Proposals as Part of Postwar Organization," Department of State Bulletin, XII, No. 297 (February 28, 1945), 352; U.S., Treasury Department, The Bretton Woods Proposals, February 15, 1945; Paul A. Samuelson, "Bretton Woods, Pro and Con," The New Republic, CXII, No. 15 (April 9, 1945), 467-69; "Message of the President to Congress: The Bretton Woods Proposals, International Monetary Fund and International Bank for Reconstruction and Development," Department of State Bulletin, XII, No. 295 (February 12, 1945), 220-22; John H. Williams, "International Monetary Plans After Bretton Woods," Foreign Affairs, XXIII, No. 1 (October, 1944), 38-56; International Monetary Fund, Selected Documents, Board of Governors Inaugural Meeting, Savannah, Ga., March 8 to 18, 1946 (Washington: International Monetary Fund, April, 1946); Murray Shields (ed.), International Financial Stabilization (New York: Irving Trust Co., 1944); and International Monetary Fund, Report of the Executive Directors and Summary Proceedings, September 27 to October 3, 1946, International Monetary Fund, First Annual Meeting of the Board of Governors (Washington: International Monetary Fund, November, 1946).

that exchange rates could and should be altered under certain circumstances.[63] However, especially in more recent years, most industrialized countries have come to view exchange rate depreciation as something to be avoided if at all possible.[64] The I.M.F. has generally been acquiescent in regard to these attempts at maintaining rigid exchange rates. Furthermore, the I.M.F. Agreement contained no provisions for removing gold from its position as the ultimate reserve. In fact, the Articles of Agreement stated that

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[63]U.S., Treasury Department, Articles of Agreement . . . , art. IV, secs. 1-8, pp. 4-7.

[64]"The Ministers and Governors reaffirmed their determination to cooperate in the maintenance of exchange stability and orderly exchange arrangements in the world, based on the present official price of gold." "Communiqué Issued after the Ministerial Meeting of the Group of Ten, March 29-30, 1968, in stockholm," reprinted in "International Monetary System," International Financial News Survey, XX, No. 13 (April 5, 1968), 1.

". . . various disadvantages are inherent in exchange rate adjustments, and governments are properly reluctant to resort to them--particularly reserve currency countries." U.S., President (L. B. Johnson), Economic Report of the President Together With the Annual Report of the Council of Economic Advisers, 1966, p. 152. Also see Charles A. Coombs et al., "Conversations on International Finance," Monthly Review, Federal Reserve Bank of New York, XLV, No. 8 (August, 1963), 114-21; Charles A. Coombs, "Treasury and Federal Foreign Exchange Operations and the Gold Pool," Monthly Review, Federal Reserve Bank of New York, XLVI, No. 3 (March, 1964), 47-56; "A New Plan for Gold," The Economist, March 24, 1962, pp. 1138-39; "Treaty Establishing the European Economic Community, Rome, March 15, 1957," Treaty Series, CCXCVIII, No. 4300, Title II, chap. 2 (United Nations, 1958), 55-58; and Robert Mundell, "The International Monetary System: Functioning and Possible Reform," The United States Balance of Payments, Hearings before the Joint Economic Committee, 88th Cong., 1st Sess., Part 3, November, 1963, pp. 546-47.

> the par value of the currency of each member shall be expressed in terms of gold as a common denominator or in terms of the United States dollar of the weight and fineness in effect on July 1, 1944.[65]

Two of the most obvious evolutionary changes in the history of the I.M.F. took the form of quota increases, one occurring in 1959 and one in 1965.[66] In addition to the quota increases, the certainty of the drawing rights was increased in 1952 through the establishment of a program of stand-by arrangements or credits. Under a stand-by arrangement a country is assured, subject to the specific terms of the arrangement, that it can purchase other currencies from the I.M.F. over a specific period of time (usually six months).[67]

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[65]U.S., Treasury Department, Articles of Agreement . . . , art. IV, sec. 1 (a), p. 4.

[66]The original quotas provided for by the final draft of the Fund Agreement amounted to the equivalent of $8.8 billion. See U.S., Department of State, Proceedings and Documents of the United Nations . . . , I, 634-35.

In 1959 the I.M.F. quotas were increased by 50 percent. However, this increase was not the result of quinquennial review provided for in the Fund Agreement (art. III, sec. 2) but rather the result of a special review brought about by the U.S. recession of 1958. See International Monetary Fund, Enlargement of Fund Resources Through Increases in Quotas, A Report by the Executive Directors to the Board of Governors (Washington: International Monetary Fund, 1958).

Following the most recent quinquennial review, a 25 percent general increase in quotas was agreed upon in 1965. This brought the total Fund quotas to $21 billion. See Oscar L. Altman, "Fund Quotas Will be Increased to $21 Billion," The Fund and Bank Review: Finance and Development, II, No. 4 (December, 1965), 205-16.

[67]George Nicoletopoulous, "Stand-By Arrangements," The Fund and Bank Review: Finance and Development, I, No. 3

In 1962 an agreement, now referred to as the "General Arrangements to Borrow," was reached between the I.M.F. and ten of its major members.[68] Under this agreement the Group of Ten committed themselves to lend up to $6 billion to the I.M.F. if such loans were needed.[69] The

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(December, 1964), 192-97. Also see Fleming, pp. 34-35; International Monetary Fund, "Executive Board Decisions on Stand-By Arrangements," Selected Decisions of the Executive Directors (2d ed.; Washington: International Monetary Fund, September, 1963), pp. 24-32; Shigeo Horie, The International Monetary Fund, Retrospect and Prospect (New York: St. Martin's Press, 1964), pp. 139-40.

It should be noted that stand-by arrangements in force have equaled almost $2 billion (1962), but at the end of the 1967 I.M.F. fiscal year (April 30) they equaled $401 million. International Monetary Fund, 1967 Annual Report of the International Monetary Fund (Washington: International Monetary Fund, 1967), p. 139.

[68] International Monetary Fund, "Executive Board Decision No. 1289-(62/1), January 5, 1962," in 1962 Annual Report of the International Monetary Fund (Washington: International Monetary Fund, 1962), pp. 234-45. Also see text of letter from Mr. M. W. Baumgarter to Mr. Douglas Dillon, December 15, 1961, reprinted in Hans Aufricht, The International Monetary Fund: Legal Bases, Structure, Functions (New York: Frederick A. Praeger, 1964), pp. 95-97.

The ten countries entering this agreement were Belgium, Canada, France, Germany, Italy, the Netherlands, Sweden, the United Kingdom, and the United States. These are the so-called "Group of Ten" countries.

[69] The Articles of Agreement provided two ways by which the Fund's resources might be increased: (1) through increasing quotas and (2) through arrangements whereby one or more Fund members agreed to lend their currencies to the Fund under agreed terms and conditions. The Fund cannot, however, require that such a loan be made. U.S., Treasury Department, Articles of Agreement . . . , art. VII, sec. 2 (i). Also see International Monetary Fund, "Executive Board Decision 1289-(61/1)," Selected Decisions of the Executive Directors and Selected Documents (3d ed.; Washington: International Monetary Fund, January, 1965), pp. 56-66 and International Monetary Fund, 1966 Annual Report of the International Monetary Fund (Washington: International Monetary Fund, 1966), p. 34.

purpose of these arrangements was to provide the I.M.F. enough currency claims so that it might help protect members of the Group of Ten, primarily the United States and United Kingdom, from sudden movements of short-term funds ". . . in order to avert a threat of impairment to the international monetary system."[70]

The role of the I.M.F. continues, however, to be that of a financial intermediary between deficit and surplus countries. The Fund has, to be sure, expanded its lending resources. Yet whether it has increased international liquidity can be questioned.[71] Neither has the I.M.F. improved the adjustment mechanism except perhaps by helping develop and disseminate a better understanding of economic theory. The I.M.F. has, it seems, helped to sustain and perpetuate a managed gold-exchange standard which is characterized by rigid exchange rates.

Postwar changes in the international monetary system not directly associated with the I.M.F.

Some of the postwar measures taken by England, members of the Organization for European Economic Co-operation

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[70]Per Jacobsson, "The Monetary Background of International Financing," International Financing and Investment, ed. John F. McDaniels (Dobbs Ferry, N. Y.: Oceana Publications, Inc., 1964), p. 8. Also see U.S., Congress, Senate, Committee on Foreign Relations, Hearings, Bretton Woods Agreements Act Amendment, 87th Cong., 2d Sess. on H.R. 10162, March 30 and April 3, 1962.

[71]See Fritz Machlup, The Cloakroom Rule of International Reserves: Reserve Creation and Resources Transfer ("Reprints in International Finance," No. 1; Princeton: Princeton University Press, August, 1965).

(O.E.E.C.), and the United States to reestablish and maintain an international gold-exchange standard within which more than one centre country exists are of particular interest. They are evidence of the international monetary system's haphazard postwar evolvement and its basic vulnerability to speculative expectations of changes in exchange rates and the price of gold.

The restoration of European convertibility and the postwar sterling area.--Although the pound sterling never fully regained the international status it enjoyed in 1930, it ultimately emerged along with the U.S. dollar as a major key currency in the postwar international gold-exchange standard.

The United States prodded England to restore convertibility almost immediately after the war. The U.S. agreed to extend a $3.75 billion line of credit to England and to cancel British obligations resulting from wartime lend-lease provided that England would no longer restrict payments to the U.S. for current transactions and would avoid restrictions on the use of American-owned Sterling balances.[72] On July 15, 1947 England restored external convertibility on newly acquired sterling balances at a

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[72]Great Britain, Parliamentary Papers, Cmd. 6708, 1945, "Financial Agreement Between the Governments of the United States and the United Kingdom." Also see Yeager, p. 379.

$4.03 parity. This rate seemed to overvalue the pound,[73] and England's problems were complicated by the impossibility of maintaining segregation between the currently earned sterling and the old sterling balances. Foreign holders of sterling jumped at the chance to convert, and the proceeds of the U.S. loan were wiped out by March, 1948. While England's balance-of-payments position had strengthened by mid-1949, members of the sterling area, finding their current accounts in deficit, began to draw on the dollar pool in London. Speculation about devaluation began, and the difficulty of preventing speculative capital movements under such conditions again became apparent. On September 18, 1949 the pound was devalued to $2.80.[74]

In the meantime, the O.E.E.C. had been attempting to reduce trade restrictions and improve the adjustment mechanism among its members.[75] The clearing agreements of

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[73]See Lloyd A. Metzler, "Exchange Rates and the International Monetary Fund," International Monetary Policies, Postwar Economic Studies No. 7 (Washington: Board of Governors of the Federal Reserve System, September, 1947), pp. 38-41.

[74]See E. Victor Morgan in his revision of Feavearyear, The Pound Sterling . . . , 2d ed., pp. 414-17; Yeager, pp. 378-83; Gottfried Haberler, Currency Convertibility, National Economic Problems No. 451 (New York: American Enterprise Association, 1954), pp. 16-18; Philip Bell, The Sterling Area in the Postwar World (Oxford: Clarendon Press, 1956), pp. 18-64; Brian Tew, International Monetary Co-Operation, 1945-63 (7th ed.; London: Hutchinson & Co., 1963), pp. 151-92; R. G. Hawtrey, Towards the Rescue of Sterling (London: Longmans, Green, 1954), pp. 1-72; and A. R. Conan, The Problem of Sterling (London: Macmillan, 1966), pp. 1-66.

[75]W. M. Scammell, International Monetary Policy (London: Macmillan, 1957), pp. 264-78; Raymond F. Mikesell,

the O.E.E.C. proved inadequate and they were replaced by the European Payments Union (E.P.U.) in 1950.[75] The experience of the E.P.U. has obvious implications for the contemporary question of how to allocate newly created reserve assets among countries. Under the European Payments Union Agreement any member country would provide its own currency to any other member who needed it for purposes of maintaining a stable exchange rate. The bilateral debts and credits of each member would be reported monthly to the Union where the bilateral claims of all members would be consolidated and netted against each other. Still all net claims did not have to be settled in gold or dollars. Each member was assigned a quota, and surplus countries were required to grant credit in amounts of up to one-fifth of their quotas to countries in deficit with the Union. After the one-fifth quota limit was reached, net deficit positions had to be settled with an increasing percentage of gold. Under this arrangement there proved to be a strong tendency on the part of some members to run up deficits which were guaranteed to be covered by other Union members. In 1954 the Union Agreement was modified so that all debit positions

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Foreign Exchange in the Postwar World (New York: Twentieth Century Fund, 1954), pp. 100-17; and Robert Triffin, Europe and the Money Muddle (New Haven: Yale University Press, 1957), pp. 148-49.

[76]Its members were Austria, Belgium-Luxembourg, Denmark, France, Germany, Greece, Iceland, Italy, the Netherlands, Norway, Portugal, Sweden, Switzerland, Turkey, the United Kingdom, and Ireland.

within the quotas had to be covered by a 50 percent gold payment.[77]

On December 27, 1958 most of the member countries restored the external convertibility of their currencies. Accordingly, the E.P.U. was dissolved and the European Monetary Agreement automatically came into effect.[78]

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[77]For a more detailed discussion of the European Payments Union and its operations see: Robert Triffin, The World Money Maze (New Haven: Yale University Press, 1966), pp. 441-47; European Payments Union, First Annual Report of the Managing Board, 1st July 1950 - 30th June 1951 (Paris: Organization for European Economic Co-operation, August, 1951), pp. 11-20; Randall Hinshaw, Toward European Convertibility ("Essays in International Finance," No. 31; Princeton: Princeton University Press, November, 1958), pp. 12-26; A European Payments Union and the Rules of Commercial Policy to be Followed by Member Countries (Paris: Organization for European Economic Co-operation, 1950); J. E. Meade, The Atlantic Community and the Dollar Gap (London: Friends of the Atlantic Union, 1954), pp. 9-12; and Directives for the Application of the Agreement for the Establishment of a European Payments Union, Decision of the Council of O.E.E.C. of 18th August 1954, as Amended up to 30th June 1954 (Paris: Organization for European Economic Co-operation, June, 1954).

[78]The European Monetary Agreement and the institutions formed under it, the European Fund and the Multilateral System of Settlements, seem to have been relatively insignificant factors in the postwar monetary history of Europe. However, the interested reader is referred to: Organization for European Economic Co-operation, Memorandum of the Secretary-General, Prolongation of the European Payments Union to 30th June 1956 and Adoption of a European Monetary Agreement (Paris: Organization for European Economic Co-operation, August, 1955), pp. 14-36. Also see Robert Triffin, The Future of the European Payments System, Wicksell Lectures (Stockholm: Wicksell Lecture Society, 1958), pp. 37-43; European Payments Union, Fifth Annual Report of the Managing Board, Financial Year 1954-55 (Paris: Organization for European Economic Co-operation, 1955), p. 50; and Directives for the Application of the European Monetary Agreement, Decision of the Council of the O.E.E.C. of 29th July 1955 (Paris: Organization for European Economic Co-operation, 1955), pp. 8-10.

Through this process of evolution and changing legal agreements, the sterling area has continued to exist.[79] When convertibility was restored in 1958, the pound was stabilized in terms of dollars, not gold. But with the dollar being defined in terms of and convertible into gold, the pound was indirectly stabilized in terms of gold. Two significant institutions both referred to as "pools" grew out of this arrangement. The so-called dollar pool is the stock of dollar claims held and managed by the Bank of England. Because the sterling area members hold a large portion of their reserves in sterling and do much of their international banking in London, earnings of foreign currencies including dollars are generally exchanged for sterling claims at the Bank of England. The members of the

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[79]The natural evolvement of the sterling area and its raison d'être have been well documented. See the following: A. C. L. Day, The Future of Sterling (London: Oxford University Press, 1954); Paul Louis Jean Bareau, The Sterling Area: What It Is and How It Works ("British Commonwealth Affairs," No. 3; London: Longmans, Green & Co., 1948); The Pound Sterling and Sterling Area After World War II ("New York University Publications: Institute of International Finance Bulletin," No. 140; New York: New York University Press, 1945); Dennis H. Robertson, Britain in the World Economy (London: George Allen & Unwin, 1954), pp. 32-52; Bell, passim; A. R. Conan, The Rationale of the Sterling Area (London: Macmillan & Co., 1961); Roy Harrod, The Pound Sterling ("Essays in International Finance," No. 13; Princeton: Princeton University Press, 1952); S. I. Katz, "Sterling Instability and the Postwar Sterling System," Review of Economics and Statistics, XXXVI (February, 1954), 81-87; Paul Louis Jean Bareau, The Future of the Sterling System (London: Institute of Economic Affairs, 1958); Feavearyear, passim; Hawtrey, Towards the Rescue . . . ; Peter B. Kenen, British Monetary Policy and the Balance of Payments 1951-1957 (Cambridge: Harvard University Press, 1960); and R. G. Hawtrey, The Pound at Home and Abroad (London: Longmans, Green & Co., Ltd., 1961).

area draw against this pool to obtain dollar claims needed to settle obligations with non-member countries requiring dollar payments.

The other "pool" was the so-called Group of Ten's London gold pool. This was a pool of currencies made available for stabilizing the price of gold in the London gold market. The gold losses which occurred were shared among the group members on a quota basis.[80]

While the gold pool no longer exists, the sterling area does. It is continually plagued by the problems of speculative flows from one form of international reserve to another. The problem was summed up in a memorandum submitted by Her Majesty's Treasury to the Radcliffe Committee:

> World trade depends upon an adequate payments mechanism. It is vital to the United Kingdom that such a mechanism should be maintained, both because of our national interest in world economic progress and because of our dependence on international trade. Sterling plays the major role in this, and there is no substitute for it. Certain particular advantages flow from this position of sterling. First, United Kingdom citizens because they are able to use their own currency over a large part of the world, are themselves saved the inconveniences of operating in foreign currencies, and they have access to vital raw materials on the most favourable terms on the commodity markets established in the United Kingdom. Second, sterling as an international currency brings similar advantages to the other members of the sterling area and to the commonwealth as a whole. Finally, the banking, insurance and similar transactions carried out in London based

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[80] See Charles A. Coombs, "Treasury and Federal Reserve Foreign Exchange Operations and the Gold Pool," Federal Reserve Bulletin, L, No. 3 (March, 1964), 294-307.

upon the international character of sterling are in themselves profitable.

But the counterpart of these advantages is the greater risks to which we are exposed from the considerable sterling balances which other countries hold. Whenever doubt is cast on our solvency these balances come under pressure, thus tending to aggravate the very situation that caused the doubts to arise.[81]

The dollar as a postwar key currency and some ad hoc measures taken to protect it.--Immediately following World War II the U.S. dollar was the only major currency which was fully convertible.[82] Even though the United States transferred over $33 billion of goods and services exclusive of military items to the rest of the world through gifts and loans between 1946 and 1953,[83] this period has often been described as one in which the rest of the world suffered a "dollar shortage."[84] The definition of a dollar shortage,

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[81]Great Britain, Her Majesty's Treasury Committee on the Working of the Monetary System, "The Sterling Area," Principal Memoranda of Evidence, Vol. I, pars. 8, 9 (August, 1959). Also see Great Britain, Parliamentary Papers, Cmd. 827, August, 1959, "Report of the Committee on the Working of the Monetary System (The Radcliffe Committee Report)," pp. 224-68.

[82]The United States was still under the obligation arising from the Gold Reserve Act of 1934 to convert official foreign dollar holdings into gold at $35 an ounce.

[83]Staff Papers Presented to the Commission on Foreign Economic Policy (The Randall Commission) (Washington: U.S. Government Printing Office, February, 1954), pp. 6-22.

[84]For a detailed discussion of the dollar shortage see: Charles P. Kindleberger, The Dollar Shortage (New York: The Technology Press of M.I.T. & John Wiley & Sons, Inc., 1950); Charles N. Henning, International Finance (New York: Harper & Bros., 1958), pp. 391-416; Roy Harrod, "Imbalance of International Payments," International Monetary Fund Staff Papers, III (April, 1953), 1-46; Elliot

the actual existence of such a shortage, and its duration have been thoroughly debated.[85] However, two things seem clear: (1) foreign countries were not building up reserves in the form of dollars to any large extent in the late 1940's and early 1950's and (2) the practical urgency of the problem was eliminated by the continuing U.S. balance-of-payments deficits which began in 1950.

The persistent deficits in the U.S. balance of payments were at first welcomed as a means whereby the rest of the world could rebuild reserves which the war and postwar reconstruction had depleted. However, in the latter 1950's widespread concern over the continuing U.S. deficits arose. The situation was stated succintly in President Kennedy's 1961 White House Message on the balance of payments and gold outflow:

Zuppnick, Britains Postwar Dollar Problem (New York: Columbia University Press, 1957); Donald MacDougall, The World Dollar Problem (London: Macmillan, 1957); Miroslav A. Kriz, Postwar International Lending ("Essays in International Finance," No. 8; Princeton: Princeton University Press, Spring, 1947); and Erik Hoffmeyer, Dollar Shortage and the Structure of U.S. Foreign Trade (Copenhagen: Ejnar Munksgaard, 1958), pp. 11-206.

[85] Charles P. Kindleberger, "The Dollar Shortage Revisited," American Economic Review, XLVIII (June, 1958), 388-95; Raymond F. Mikesell, "Dollar Shortage: A Modern Myth," Journal of Political Economy, LXVII (June, 1959), 307-309; Donald MacDougall, The Dollar Problem: A Reappraisal ("Essays in International Finance," No. 35; Princeton: Princeton University Press, November, 1960); and A. R. Conan, "The United States Balance of Payments in 1968," Statement in The United States Balance of Payments, Statements by Economists, Bankers, and Others on the Brookings Institution Study, Prepared for the Joint Economic Committee, 88th Cong., 1st Sess., 1963, pp. 99-104.

> For the past decade our international transactions have resulted in a deficit. . . . The surplus of our exports over our imports . . . has not been large enough to cover our expenditures for United States military establishments abroad, for capital invested abroad by private American businesses, and for government economic assistance and loan programs. All of these outlays are essential. . . .
>
> . . . this growth in dollar holdings placed upon the United States a special responsibility--that of maintaining the dollar as the principal reserve currency of the free world.
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> In 1958 and 1959 the deficit in our balance of payments sharply increased--to $3.5 billion in 1958 and to $3.8 billion in 1959. . . . However, in these years, unlike the period 1951-57, the deficit resulted in large transfers of gold to foreign accounts as well as a further increase in foreign dollar holdings. These gold transfers . . . reflect a decision by foreigners to take more of their earnings in gold and to hold less in dollars.[86]

The United States has responded to the continuing deficits and gold outflows primarily with stopgap measures rather than applying the "classical medicine" of more restrictive monetary and fiscal policies. These measures have primarily been aimed at warding off crises rather than eliminating the inherent instability of the present international monetary system which is at the root of the crises. Furthermore, many of the measures taken tend to exert a restrictive influence on international trade and capital movements.

The first major stopgap measure was initiated in 1961 when the Federal Reserve System began to make reciprocal

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[86] U.S., President (Kennedy), Message from the President Relative to U.S. Balance of Payments and the Gold Outflow from the United States, 87th Cong., 1st Sess., February 6, 1961, House Doc. 84, pp. 1-3.

currency arrangements with other major central banks in an attempt to minimize U.S. gold losses. These swap arrangements are bilateral agreements which create reciprocal stand-by lines of credit whereby a central bank obligates itself to exchange on request its currency for that of its partner central bank up to some designated amount for a specific period. The swap transactions are always reversed at the original exchange rate. For example, the Federal Reserve can use its credit line and obtain from a foreign central bank a claim on that bank's currency. The Federal Reserve can exchange the foreign currency claims so acquired for dollar claims already held by the foreign central bank partner. The foreign central bank will thus have exchanged dollar claims which were subject to the risk of a change in the exchange rate for dollar claims with an exchange guarantee. When pressure against the dollar is eased, the Federal Reserve must accumulate a large enough amount of the foreign currency involved to repurchase the dollars held by the foreign central bank partner and liquidate the swap.[87]

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[87] Federal Reserve Bank of Atlanta, "Central Bank Swaps--A Bulwark of International Monetary Cooperation," Monthly Review, December, 1967, pp. 162-67.

It should be noted that the Federal Reserve reciprocal currency arrangements amounted to $7.08 billion as of March 8, 1968. Charles A. Coombs, "Treasury and Federal Reserve Foreign Exchange Operations," Federal Reserve Bulletin, LIV, No. 3 (March, 1968), 268. Also see U.S., Treasury Department, Maintaining the Strength of the United States Dollar in a Strong Free World Economy, January, 1968, pp. 22-23.

If the pressures on the dollar are longer lasting than the duration of the swap agreements, the Treasury must acquire the necessary foreign currency claims by the sale of gold, I.M.F. drawings, or through the sale of so-called Roosa bonds. Roosa bonds are medium-term obligations of the U.S. Treasury which are normally denominated in the currency of the purchasing country.[88]

Another major step to protect the dollar came in the form of the Interest Equalization Tax. This tax, effective July 19, 1963, was specifically imposed to increase by 1 percent per year the cost of long-term capital funds in the U.S. capital markets to borrowers in foreign industrialized countries.[89] The tax is currently imposed at an annual rate equivalent of 1.25 percent.[90]

The Interest Equalization Tax was supplemented in February, 1965, by the Voluntary Cooperation Program for business firms. This program was basically a request for U.S. firms to attempt to achieve greater net exports, return more foreign earnings to the U.S., and to postpone direct

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[88]The amount of these nonmarketable U.S. Treasury Bonds and Notes held by official institutions of foreign countries totalled $1,479 million as of February, 1968. Board of Governors of the Federal Reserve System, Federal Reserve Bulletin, LIV, No. 3 (March, 1968), A-74.

[89]U.S., Statutes at Large, LXXVIII, 563. This was extended to cover bank loans of more than one year's maturity in February of 1965. See U.S., Statutes at Large, LXXIX, 243.

[90]U.S., Treasury Department, Maintaining the Strength . . . , p. 158.

investment in developed countries.[91] The Voluntary Foreign Credit Restraint Program for banks and other financial institutions, announced at the same time, requested that these institutions not exceed specific ceilings in their foreign loans and investments.[92] On the 1st of January, 1968, an executive order transformed the Voluntary Cooperation Program for business firms into a mandatory program but greatly reduced the amount of capital outflow allowed.[93] Among the provisions of this executive order were:

1. that a moratorium would be placed on any new capital outflows from the United States for direct investment into the highly-developed countries, principally those of Western Europe;

2. that for the less-developed countries, taken as a group, U.S. companies may not make a combination of annual new direct investment and investment of retained earnings which exceeds 110 percent of their average annual new direct investment which took place in these countries during the 1956-66 period;

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[91] U.S., President (L. B. Johnson), "Reviewing the International Balance of Payments and Our Gold Position," Message from the President of the United States Relative to Review of International Balance of Payments and Our Gold Position, 89th Cong., 1st Sess., February 10, 1965, House Doc. 83.

[92] Ibid., pp. 2-6.

[93] "Executive Order 11387 Governing Certain Capital Transfers Abroad, January 1, 1968," Weekly Compilation of Presidential Documents, IV, No. 1 (January 8, 1968), 26-27.

3. for a certain group of countries which include Canada, Japan, Australia, New Zealand, the United Kingdom, and some of the oil-producing countries, U.S. companies are allowed to make any combination of annual new direct investment or reinvestment of retained earnings which does not exceed 65 percent of their average annual direct investment plus their reinvestment of earnings which took place in 1965 and 1966.[94]

In January, 1968, the guidelines issued under the 1965 Voluntary Foreign Credit Restraint Program were revised to further restrict U.S. lending abroad, especially to the countries of Western Europe.[95] Furthermore, the President, by granting the Board of Governors authority to make the guidelines mandatory, in essence imposed discriminatory exchange controls.[96]

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[94] Ibid. It should also be noted that this order imposed mandatory repatriation requirements upon U.S. firms.

[95] See Board of Governors of the Federal Reserve System, "Revised Guidelines for Banks and Nonbank Financial Institutions," Federal Reserve Bulletin, LIV, No. 3 (March, 1968), 257-65.

[96] The President ordered these measures be taken by virtue of the power vested in him by sec. 5b of the act of October 6, 1917 as amended (U.S., Code, Vol. XII, 95a) and the national emergency declared on December 16, 1950. The amended 1917 act declares that "During time of war or during any other period of national emergency declared by the President, the President may, through any agency that he may designate, or otherwise, investigate, regulate, or prohibit, under such rules and regulations as he may prescribe, by means of licenses or otherwise, any transactions in foreign exchange, transfers of credit between or payments by banking institutions as defined by the President. . . ." U.S., Code, Vol. XII, 95a. Also see U.S., President (Truman), Proclamation No. 2914,

These policy measures notwithstanding another crisis for the international monetary system and the dollar was set off by England's devaluation in November, 1967.[97] By early 1968 speculation against the dollar mounted to such an extent that on March 14 the day's turnover of gold in the London market was reported at $440 million.[98] As a result, the London Gold Market was closed and on March 17th the governors of the central banks of the Gold Pool Nations released a press statement which included the following points:

> . . . the U.S. Government will continue to buy and sell gold at the existing price of $35 an ounce in transactions with monetary authorities.
>
> The Governors agreed to cooperate fully to maintain the existing parities as well as orderly conditions in their exchange markets in accordance with their obligations under the Articles of Agreement of the International Monetary Fund. The

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December 16, 1950, Proclairing the Existence of a National Emergency, 1950.

It should also be noted that exchange controls affecting the individual U.S. citizen have also been imposed. For example, Executive Order 11387 of January 1, 1968 declared: "1. (a) Any person subject to the jurisdiction of the United States who, alone or together with one or more affiliated persons, owns or acquires as much as a 10% interest in the voting securities, capital or earnings of a foreign business venture is prohibited on or after the effective date of this Order, except as expressly authorized by the Secretary of Commerce, from engaging in any transfer of capital to or within any foreign country or to any national thereof outside the United States." Weekly Compilation of Presidential Documents, IV, No. 1, 26-27.

[97] See First National City Bank of New York, "General Business Conditions," Monthly Economic Letter, December, 1967, pp. 133-36 and First National City Bank of New York, "Sterling Devaluation and Its Aftermath," ibid., pp. 136-38.

[98] "Gold Trading is Halted in London for Today: Federal Reserve Lifts Discount Rate to 5%," The Wall Street Journal, March 15, 1968, p. 3.

> Governors believed that henceforth officially-held gold should be used only to effect transfers among monetary authorities, and, therefore, they decided no longer to supply gold to the London Gold Market or any other gold market. . . . They no longer feel it necessary to buy gold from the market. Finally, they agreed that henceforth they will not sell gold to monetary authorities to replace gold sold in private markets.[99]

This action, of course, resulted in a two-tier price system for gold. The continued existence of such a system is at best very uncertain.

Summary

The international monetary system which exists today is based on a gold-exchange standard, but a gold-exchange standard which differs in many ways from those of the past. Today the objectives of economic policy include only indirectly the maintenance of the gold value of the currency. The objectives of stable price levels, high levels of employment and production as well as a sustained high rate of economic growth are now given priority. Nevertheless, the essential characteristics of the gold-exchange standard still exist as is exemplified by the fact that at the end of December, 1967, U.S. liquid liabilities to foreigners totalled almost $16 billion, $14 billion of which was held by official foreign institutions, while U.S. gold reserves

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[99] "Text of Statement by Governors of Central Banks," The Weekly Bond Buyer, CLXXI, No. 3911 (March 25, 1968), 10. It should be noted that on March 18, 1968 the United States aliminated the requirement that each Federal Reserve Bank had to maintain reserves in the form of gold certificates of not less than 25 percent of its Federal Reserve Notes in circulation. U.S., Statutes at Large, LXXX, 269.

amounted to approximately $12 billion.[100] However, the present system is based on a two-tier price system for gold. The system is furthermore bolstered by numerous bilateral ad hoc agreements most of which take the form of credit lines extended for short periods of time only. Finally, the persistent deficits in the U.S. balance of payments have resulted in exchange restrictions being imposed on the U.S. dollar, the major key currency of the present international monetary system.

That these measures were deemed necessary is indicative of the basic vulnerability of the present international monetary system to speculative expectations of possible changes in gold prices and exchange rates. It should therefore be apparent that before any plan to modify the present international monetary system is adopted, careful consideration should be given to its likely effect on world expectations about the future character of international monetary reserves.

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[100] Federal Reserve Bulletin, LIV, No. 3, A-68, A-70.

CHAPTER II

THE DILEMMA OF THE PRESENT INTERNATIONAL MONETARY SYSTEM: A POSSIBLE SOLUTION AND A QUESTION THAT MUST BE DEALT WITH

The Dilemma

A question of current concern is whether or not the future need for international reserves will be adequately provided for under existing international monetary arrangements. An amount of international reserves can be inadequate in the sense that it is too small to support an increase in international transactions. In order to focus on this possibility assume that the present amount of international reserves is at an optimum level relative to the current level of international transactions. Under such a condition, if additional real international transactions are to be forthcoming, they must be accompanied by an increase in international reserves barring any decrease in price levels and/or improvement in the balance-of-payments adjustment mechanism and/or improvement in the international money mechanism. This proposition is analagous to the conclusion drawn from an application of the quantity theory of money to a domestic economy (i.e., unless the price level falls, or the velocity of money increases, or the payment system becomes more efficient, additions to the money supply will

be required in order to support a larger volume of real transactions). While the proposition that a direct relationship exists between the required level of international reserves and the volume of international transactions may be acceptable to most students of the international monetary mechanism, there is by no means agreement about how to define quantitatively an optimum level of international reserves. Consequently, there presently exists a great deal of disagreement over whether the present level of international reserves is excessive, deficient, or optimum. This question has been taken up at some length in the literature and will not be dealt with here.[1] However, it would seem that the majority of

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[1]See Fritz Machlup, The Need for Monetary Reserves ("Reprints in International Finance," No. 5; Princeton: Princeton University Press, October, 1966); J. Marcus Fleming, Toward Assessing the Need for International Reserves ("Reprints in International Finance," No. 58; Princeton: Princeton University Press, February, 1967); Fritz Machlup, World Monetary Debate--Bases for Agreement ("Reprints in International Finance," No. 4; Princeton: Princeton University Press, September, 1966); J. Amuzegar, "International Liquidity: Meaning and Significance for the Haves and Have-Nots," The Indian Economic Journal, XIV, No. 3 (October-December, 1966), 338-52; "International Liquidity and Reserve Creation," 1966 Annual Report of the International Monetary Fund, pp. 9-20; Edward M. Bernstein, "The U.S. Balance of Payments and International Liquidity," Statement in Guidelines for International Monetary Reform, Hearings before the Subcommittee on International Exchange and Payments of the Joint Economic Committee, 89th Cong., 1st Sess., 1965, pp. 320-44; Merlyn N. Trued, "Excerpts from Speech of Merlyn N. Trued, Assistant Secretary of the Treasury for International Affairs, June 16, 1965," Reprinted in Guidelines for International Monetary Reform, Hearings before the Subcommittee on International Exchange and Payments of the Joint Economic Committee, 89th Cong., 1st Sess., 1965, pp. 214-20; Robert A. Mundell, The International Monetary System: Conflict and Reform (Montreal, Canada: Private Planning Association of Canada,

writers dealing with this subject conclude that while there may not presently be any scarcity of international reserves, the international monetary system in its present form will not be capable of providing the additional reserves which a continued growth in international transactions will require in the foreseeable future.

1965), pp. 14-31; Gerald A. Pollack, "Perspectives on the United States International Financial Position," The United States Balance of Payments--Perspectives and Policies, Joint Economic Committee, 88th Cong., 1st Sess., 1963, pp. 53-55; George H. Willis and Fred L. Springborn, The Need for International Reserves (Washington: U.S. Treasury Department, September, 1967); Frederick L. Deming, "Statement," in New Plan for International Monetary Reserves, Hearing before the Subcommittee on International Exchange and Payments of the Joint Economic Committee, 90th Cong., 1st Sess., September 14, 1967, pp. 21-23; Henry H. Fowler, "Statement," in New Plan for International Monetary Reserves, Hearing before the Subcommittee on International Exchange and Payments of the Joint Economic Committee, 90th Cong., 1st Sess., September 14, 1967, pp. 10-12; Henry C. Wallich, "Statement," in Guidelines for International Monetary Reform, Hearings before the Subcommittee on International Exchange and Payments of the Joint Economic Committee, 89th Cong., 1st Sess., Part 1, July 27, 28, and 29, 1965, pp. 79-83; U.S., Congress, Subcommittee on International Exchange and Payments of the Joint Economic Committee, Guidelines for Improving the International Monetary System, Joint Committee Print, 89th Cong., 1st Sess., 1965, pp. 1-9; Economic Report of the President Together with the Annual Report of the Council of Economic Advisers (Washington: U.S. Government Printing Office, Transmitted to the Congress, February, 1968), pp. 178-86; Roy Harrod, "The Dollar Problem and the Gold Question," The Dollar in Crisis, ed. Seymour E. Harris (New York: Harcourt, Brace & World, Inc., 1961), pp. 46-62; Oscar L. Altman, "Professor Triffin, International Liquidity, and the International Monetary Fund," The Dollar in Crisis, ed. Seymour E. Harris (New York: Harcourt, Brace & World, Inc., 1961), pp. 256-62; Robert Triffin, Gold and the Dollar Crisis (rev. ed.; New Haven: Yale University Press, 1961), pp. 35-58; Anila Graham, International Liquidity and the Developing World (London: Economic and Development Research, Ltd., 1965), pp. 5-15; and Report of the Study Group on the Creation of Reserve Assets, Report to the Deputies of the Group of Ten (Rome, Italy: Bank of Italy Press, May 31, 1965), pp. 17-20.

The prediction that the international monetary system, if not somehow modified, will fail to meet the world's requirement for international reserves can be logically supported. Under the present international monetary system additions to the world's supply of international reserves must take one of two forms. On the one hand, additional international reserves can come about through additions to the world's stock of monetary gold reserves. On the other hand, new international reserves can be forthcoming in the form of additional short-term claims held by monetary authorities on the convertible currencies of other countries.

Additions to the world's stock of international reserves in the form of gold, assuming a constant price of monetary gold, can come about through either additional production or dishoarding of that metal. It has generally been held by most recent writers that future additions to the world's stock of international reserves from these sources is likely to be erratic and small relative to both the current stock of reserves and future needs.[2]

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[2]See Triffin, Gold and the Dollar Crisis, pp. 50-53; Oscar L. Altman, "A Note on Gold Production and Additions to International Gold Reserves," International Monetary Fund Staff Papers, VI (April, 1958), 258-86; Fritz Machlup, "Proposals for Reform of the International Monetary System," Factors Affecting the United States Balance of Payments, Compilation of Studies Prepared for the Subcommittee on International Exchange and Payments of the Joint Economic Committee, Joint Committee Print, 87th Cong., 2d Sess., 1962, p. 211; International Monetary Fund, 1966 Annual Report . . . , pp. 12-16; Robert Z. Aliber, The Future of the Dollar as an International Currency (New York: Frederick A. Praeger, 1966), pp. 62-64; Miroslav

Since the issuance of the gold policy communiqué on May 17, 1968 by the Governors of the central banks of Belgium, Germany, Italy, the Netherlands, Switzerland, the United Kingdom, and the United States, it has become even more unlikely that future needs for international reserves will be completely met in the form of gold. In the communiqué the Governors stated that in view of the present plans and efforts to provide for additional international reserves which would be fiduciary in nature, they felt that the existing stock of monetary gold was sufficient. They therefore stated that it was no longer necessary to buy gold in the market nor would they sell gold to other monetary authorities so that those authorities could replace the gold which they had sold in the market.[3]

If gold must play a decreasing role in the provision of international reserves, as indeed seems to be the case, then under the present international monetary system the larger part of the burden of meeting this need would fall on the so-called "key currencies."[4] Herein lies the source of the dilemma. Aggregate foreign-held

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A. Kriz, Gold: Barbarous Relic or Useful Instrument? ("Essays in International Finance," No. 60; Princeton: Princeton University Press, June, 1967), pp. 23-24.

[3]The Weekly Bond Buyer, CLXXI, No. 3911, 10. Also see Federal Reserve Bank of Atlanta, "Gold Policy Communiqué," Monthly Review, April, 1968, p. 51.

[4]A "key currency" can be defined as the domestic currency of a country which other countries are willing to hold claims on as part of their stock of international reserves.

claims on a key currency can increase only if the key currency country's balance of payments is in deficit. A deficit in the balance of payments of a key currency country causes that country's net reserve position to deteriorate. Thus, as a key currency or centre country provides additional international reserves to other countries in the form of claims on its currency through deficits in its balance of payments, the claims on the currency of the centre country become less acceptable as international reserves by virtue of the necessary deterioration in the key currency country's net reserve position. This dilemma is inescapable under the present international monetary system.

The problem is complicated under the present system by the existence of more than one key currency country and the fact that international reserves are also held in the form of gold. The prices of the key currencies in terms of gold and in terms of each other are, in general, stabilized within narrow limits by the monetary authorities.[5] But the official prices or exchange rates do not always conform to what the exchange rates would be in the absence of government intervention in the exchange markets. Indeed, such conformity could not be expected. Consequently, monetary authorities have, from time to time, been forced

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[5]The price of non-monetary gold has not, of course, been stabilized since May 17, 1968. See The Weekly Bond Buyer, CLXXI, No. 3911, 10.

to revalue official exchange rates to conform more closely with the rates which a free market would dictate.

One of the main problems which arises from such a system is that of speculative instability. As the "overhang" of convertible claims on a key currency increases relative to the key currency country's stock of international reserves, fears that the key currency will have to be devalued tend to increase. Such fears bring pressure on central bankers holding claims on this currency to convert these claims into other forms of international reserves. Such conversion further weakens confidence in the value of the key currency and increases the possibility that devaluation will be required. Furthermore, private speculation tends to occur against a currency which is under pressure. When continuing deficits in a key currency country's balance of payments lead private investors to speculate about the possibility of that country devaluing or imposing direct controls on exchange transactions, the private investors may try to convert their claims on the key currency before such measures are taken. Such action ". . . can quickly generate a speculative 'run'" which will tend to reduce the reserves of the key currency country, ". . . thereby strengthening the fears of devaluation and leading to a self-generating increase in the rate of decline in its reserves."[6]

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[6]Warren L. Smith, "Statement," in Guidelines for International Monetary Reform, Hearings before the Subcommittee on International Exchange and Payments of the

Such occurrences are always possible as long as there is more than one form of international reserves. The possibility of speculative shifts from one key currency to another or to gold leaves open the possibility of a violent contraction of the world's stock of international reserves and the possibility of a severe disruption of world trade. Even if such a calamity is avoided, the very possibility that it might occur could, and very likely does, restrict growth in the production of real goods and services especially in the key currency countries even though the foregone output is, of course, not obvious and extremely difficult to quantify. Such restrictions in the growth of real production can result when the formulation of economic policy becomes so strongly influenced by balance-of-payments considerations that the policy becomes more restrictive than is necessary to keep the rate of domestic inflation to a level which is internally acceptable.

A Possible Solution

Awareness of the inherent problems of the present international monetary system has, of course, existed for some time and numerous solutions have been offered. Professor Machlup has, in his taxonomical manner, grouped the various plans in the following way:

Joint Economic Committee, 89th Cong., 1st Sess., Part 1, July 27, 28, and 29, 1965, p. 62.

"A. Extension of the gold-exchange standard

1. with continuing increase of dollar and sterling reserves;
2. with adoption of additional key-currencies.

B. Mutual assistance among central banks

1. with safeguards against expansive credit and fiscal policy;
2. with extension of domestic credit and expenditures.

C. Centralization of monetary reserves and reserve creation

1. with overdraft facilities available to deficit countries;
2. with autonomous reserve creation by the world central bank;
3. with finance of aid to underdeveloped countries.

D. Increase in the price of gold

1. with the gold-exchange standard continued;
2. with the gold-exchange standard abolished.

E. Freely flexible exchange rates

1. in order to make internal monetary policies more independent;
2. because internal monetary policies are too independent."[7]

Writing has been so prolific in this area that it is a simple task to find several slightly different plans which would fit under each of Machlup's subcategories. Since this paper is primarily concerned with a question which is related only to those plans which would create a new type of reserve asset and because most of these plans

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[7]Fritz Machlup, Plans for Reform of the International Monetary System ("Special Papers in International Economics," No. 3; Princeton: Princeton University Press, August, 1962), p. 12.

have already been well publicized, it does not seem necessary to discuss each type of plan here.[8] Even the

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[8]The following are references to the types of plans referred to in Machlup's classification. The letter and number headings given here correspond to those used in Machlup's outline.

A. 1. Charles P. Kindleberger, "Statement," in Balance of Payments--1965, Hearings before a Subcommittee of the Committee on Banking and Currency, 89th Cong., 1st Sess., Part 1, 1965, pp. 360-83.

A. 2. Friedrich A. Lutz, The Problem of International Liquidity and the Multiple-Currency Standard ("Essays in International Finance," No. 41; Princeton: Princeton University Press, March, 1963).

B. 1. Per Jacobsson, "Presentation of the Sixteenth Annual Report," Summary Proceedings of the Sixteenth Annual Meeting of the Board of Governors (Washington: International Monetary Fund, September, 1961), pp. 27-32.

B. 2. Edward M. Bernstein, "The Problem of International Monetary Reserves," International Payments Imbalances and Need for Strengthening International Financial Arrangements, Hearings before the Subcommittee on International Exchange and Payments, Joint Economic Committee, 87th Cong., 1st Sess., May, 1961, pp. 107-37.

C. 1. Great Britain, Parliamentary Papers, Cmd. 6437, April, 1943.

C. 2. Triffin, Gold and the Dollar Crisis, pp. 102-20.

C. 3. Maxwell Stamp, "The Fund and the Future," Lloyds Bank Review, New Series No. 50 (October, 1958), pp. 1-20.

D. 1. Harrod, International Monetary Fund Staff Papers, III, 1-46.

D. 2. Jacques Rueff and Fred Hirsch, The Role and the Rule of Gold: An Argument ("Essays in International Finance," No. 47; Princeton: Princeton University Press, June, 1965).

E. 1. Jaroslav Vanek, "Overvaluation of the Dollar: Causes, Effects, and Remedies," Factors Affecting the United States Balance of Payments, Joint Economic Committee, 87th Cong., 2d Sess., 1962, pp. 267-85.

E. 2. George N. Halm, "Fixed or Flexible Exchange Rates," Factors Affecting the United States Balance of Payments, Joint Economic Committee, 87th Cong., 2d Sess., 1962, pp. 253-66.

Also see Robert C. Hawkins and Sidney E. Rolfe, "A Critical Survey of Plans for International Monetary Reform," The Bulletin, No. 36 (November, 1965) for a critical evaluation of the different types of proposals.

restriction to this one type of plan for reform is not in itself very limiting because numerous proposals for creating a new international reserve asset have been presented in recent years alone. Among the more publicized of these proposals are the so-called Triffin,[9] Stamp,[10] Maudling,[11] Day,[12] and Angell[13] plans. While the differences between these plans have been emphasized and possibly exaggerated by some writers, they are essentially the same in their most important aspects. Indeed they are not fundamentally different from John Maynard Keynes' proposal for the establishment of an international clearing union. Each plan provides for, in some fashion, the establishment of a supranational institution where at least some portion of the world's international reserves would be centralized. Furthermore, each of these plans proposes that this institution would create a new form of reserve asset to either supplement or supplant gold and key currencies as international reserves.

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[9]Triffin, Gold and the Dollar Crisis, pp. 102-20.

[10]Stamp, pp. 1-20.

[11]Reginald Maudling, "Statement," in Summary Proceedings of the Seventeenth Annual Meeting of the Board of Governors (Washington: International Monetary Fund, September, 1962), pp. 61-68.

[12]Great Britain, Parliamentary Papers, Cmd. 827, 1959, pp. 241, 247-48.

[13]James W. Angell, "The Reorganization of the International Monetary System: An Alternative Proposal," The Economic Journal, LXXI (December, 1961), 691-708.

Rather than describe each of these plans in detail, it would seem more useful to note some of the more important aspects of the more recent proposal to establish a "Special Drawing Account" within the International Monetary Fund. This plan is fundamentally the same as the other plans to create new reserve assets and it is currently being seriously considered for adoption.[14]

A general outline of this plan has already been agreed upon by the Executive Directors of the International Monetary Fund and the Central Bank Governors of the Group of Ten. The outline was approved by the Board of Governors of the I.M.F. at their last annual meeting held at Rio de Janeiro in September, 1968. The Board of Governors then requested that the Executive Directors draw up amendments to the Fund's Articles of Agreement which would incorporate the Special Drawing Account into the present Fund structure. This was done and was presented to the Ministers and Central Bank Governors of the ten countries which participate in the General Agreement to Borrow at their meeting in Stockholm on March 29, 1968. The participants, with the exception of France, agreed on the proposed amendments to establish the Special Drawing Account provided some relatively minor changes were made. It was directed that a final draft of the amendment be completed which would be

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[14]U.S., Congress, New Plan for International Monetary Reserves, Hearing before the Subcommittee on International Exchange and Payments of the Joint Economic Committee, 90th Cong., 1st Sess., Part 1, September 14, 1967, pp. 3-6.

transmitted to the Board of Governors for their final approval.[15] The Governors will vote by May 31, 1968 with a simple majority of the weighted votes needed for formal adoption. If such a majority is forthcoming, the proposed amendment will become effective after it has been voted acceptable by member nations holding at least 80 percent of the total I.M.F. voting power. When member nations with at least 75 percent of the total Fund quotas have formally declared that they will undertake all of the obligations required of a participant in the new facility, then the Special Drawing Account will come into legal existence. The Special Drawing Account will be activated on the decision of the Managing Director of the Fund which must be concurred with by the Executive Directors and approved by an affirmative vote of the Board of Governors which totals at least 85 percent of the total I.M.F. voting power.[16]

The proposal to provide special drawing rights through the establishment of a Special Drawing Account

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[15]International Monetary Fund, "International Monetary System," International Financial News Survey, XX, No. 13 (April, 1968), 105. Also see "Paper Gold Wins in Its Latest Bout," Business Week, No. 2014 (April 6, 1968), pp. 47-49 and First National City Bank of New York, "New Perspectives on Gold," Monthly Economic Letter, April, 1968, pp. 39-42.

[16]Pierre-Paul Schweitzer, "Proposed Amendment of Fund's Articles of Agreement," International Financial News Survey, XX, No. 17 (May, 1968), 137-39. It should be noted that the United States holds 21.9 percent of the Fund's voting power while the members of the European Economic Community (E.E.C.) together hold 16.5 percent of the voting power. Therefore, either the U.S. or all members of the E.E.C. voting together could prevent the Special Drawing Account from being activated.

within the I.M.F. is basically a noncontributory scheme for supplementing the existing supply of international reserve assets. The proposed amendment to the Articles of Agreement would divide the Fund's operations into two parts. There would be the General Account through which the transactions which the Fund now carries out would be continued. The innovation would come in the form of the establishment of a Special Drawing Account through which transactions involving the new special drawing rights would take place. When the Managing Director and the Executive Directors of the Fund decide that international conditions are such that the Special Drawing Account should be activated, the Managing Director will propose that a certain amount of drawing rights be allocated over a given period of time at a certain rate. This process shall begin following a vote of approval by at least 85 percent of the voting power of the Board of Governors. The participating countries would receive, on a noncontributory basis, their allocations of the approved drawing rights in the form of credits to their accounts in the Special Drawing Account. Each country would receive that percentage of the total drawing rights allocation which is equal to the percentage which its regular Fund quota comprises of the Fund's total quotas. It should be pointed out here that under the proposal currently being considered, every member of the Fund would be allowed to receive a portion of the special drawing rights in proportion to its regular Fund quota.

The member countries will be allowed to use their special drawing rights unconditionally, and the rights are to be accepted by all participating countries on a par with other forms of international reserves such as gold or claims on the dollar.

When a country wishes to use some part of its allocation of special drawing rights to meet an international obligation, it will first notify the Fund of this desire. The Fund will accordingly direct this drawing to a country (or countries) whose balance-of-payments and reserve positions are considered satisfactory by the Fund. The Fund will then notify the country drawn upon that it has been credited a certain amount of drawing rights in the Fund's account. The country drawn upon must give a credit in terms of its own currency in its central bank accounts to the drawing country. The country drawn upon will thus end up with an increased amount of special drawing rights. The drawing country will lose the same amount of special drawing rights but will gain an equal claim on the domestic currency of another country.

Perhaps an example is in order here. Let us assume that it is decided to allocate a total of $5 billion in special drawing rights at the rate of $1 billion a year. Assume the U.S. quota is equal to 20 percent of the Fund's total quotas. In this case the U.S. would be allocated $200 million in special drawing rights in the first year. Let us further assume that the U.S. runs a balance-of-payments

deficit in the same year and wishes to make use of $100 million of its special drawing rights. It would first notify the Fund. The Fund would direct these drawings to countries with strong reserve positions. Let us say the Fund decides to direct the drawing equally toward Sweden and Belgium. The Fund would notify each of these countries that their special drawing accounts had been increased by $50 million and that they should credit the United States with $50 million of kronor and francs respectively in their central bank accounts. The United States would thus have exchanged $100 million of special drawing rights for claims on kronor and francs worth $100 million which it could use without restriction. It might be noted that under the present proposal the drawing country would pay a moderate rate of interest on the drawings while the countries drawn upon would receive the same rate.

A participating member is required to reconstitute its position in the Special Drawing Account if its average net use of the rights calculated on the basis of the preceding five years exceeds more than 70 percent of the drawing rights allocated it by the Fund. Otherwise, a country has no reconstitution obligation. On the other hand, a participating country which finds itself with a surplus in its balance of payments or a strong reserve position is obligated to accept drawing rights up to an amount which is twice as large as its own allocation of the special drawing rights. Such countries will, of course, be

allowed to hold larger amounts if they desire. It should perhaps be pointed out that the drawing rights would also have a gold value guarantee similar to that expressed in art. IV, sec. 8 of the Fund's present Articles of Agreement.[17]

The plan to create special drawing rights, or a plan similar to it, could help prevent any future shortage of international reserves if the world's central bankers and monetary authorities are willing to treat the special drawing rights (or bancors, X.I.M.F. units, etc.) as part of their international reserves. If such willingness on the part of monetary authorities does come into being, then by definition the creation of the special drawing rights will add to the world's stock of international reserves.

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[17]"(a) The gold value of the Fund's assets shall be maintained notwithstanding changes in the par or foreign exchange value of the currency of any member.

(b) Whenever (1) the foreign exchange value of a member's currency has, in the opinion of the Fund, depreciated to a significant extent within that member's territories, the member shall pay to the Fund within a reasonable time an amount of its own currency equal to the reduction in the gold value of its currency held by the Fund." U.S., Department of State, International Organization and Conference Series 55, United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 1 to July 22, 1944, Final Act and Related Documents, Department of State Publication No. 2187, art. IV, sec. 8, 1944, p. 31.

For a more detailed discussion of the plan to establish a system of "special drawing rights" see U.S., Congress, New Plan for International Monetary Reserves, Hearing before the Subcommittee on International Exchange and Payments of the Joint Economic Committee, 90th Cong., 1st Sess., Part 1, September 14, 1967 and Part 2, November 22, 1967, cited hereafter as U.S., Congress, New Plan for International Monetary Reserves; Schweitzer, pp. 137-39; and Report of the Study Group on the Creation of Reserve Assets, May 31, 1965.

It is, of course, difficult to predict if central banks will consider, and continue to consider, the special drawing rights to be on a par with the other forms of international reserves which would continue to exist under the proposed arrangement. If any given amount of special drawing rights becomes less acceptable in the minds of central bankers than an amount of gold, or key currencies defined by international agreement to be equal in value to that amount of drawing rights, then the central bankers might try to divest themselves of the drawing rights and replace them with gold or key currencies. Recent experiences with speculative flights from key currency to key currency and to gold should be sufficient reminders that a newly created form of reserve asset might also be subject to similar movements. The possibility of such speculative flights would be increased by the coexistence of several other forms of reserve assets.

It is postulated that if the special drawing rights become and remain fully acceptable on a par basis with other forms of international reserves and if their rate of allocation is not excessive, then their creation will, ceteris paribus, lead to the achievement of a more efficient international monetary system. On the other hand, if their acceptability declines relative to that of other reserve assets or if their rate of allocation is excessive, it is further postulated that, ceteris paribus, the international monetary system would be more efficient without their

creation. These statements, of course, call for a definition of efficiency in regard to the world monetary system. At a relatively high level of abstraction we can define an efficient international monetary system as one which facilitates international trade and transactions so that production within countries can be specialized in accord with comparative advantages. As we lower the level of abstraction the definitional problem becomes more difficult. However, it would seem that any modification of the international monetary system which would lessen the need or desire for international trade or exchange restrictions, and/or reduce disequilibrating flows of capital, and/or reduce inflationary or deflationary pressures on world prices would improve the efficiency of the world monetary system.

A Question Which Must be Dealt With

This discussion brings us to the more specific question with which this paper is primarily concerned. That is, assuming it is decided that additional international reserve assets should be created, would the direct allocation of some portion of these reserve assets to underdeveloped countries help achieve a more efficient international monetary system.[18] The answer to this question depends on what the underdeveloped countries would do with any newly

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[18] It should perhaps be pointed out again that the plan currently being considered by the I.M.F. does not propose that the total amount of any newly created reserve assets be directly allocated to the underdeveloped countries (nor do most of the plans currently being offered).

created international reserve assets which might be directly allocated to them.

The following analysis of this question will be couched in terms of "S.D.R.'s" (special drawing rights) rather than the cumbersome term "newly created international reserve assets." The term "S.D.R." is used in this discussion as being generally representative of any new fiduciary instruments which are purposely created by means of international agreement to function as international reserve assets.

The analysis itself will consider the two basic use alternatives between which the underdeveloped countries could choose. First, they could use the S.D.R.'s to add to their stocks of international reserves to be used for meeting temporary deficits in their balances of payments. This type of behavior will be discussed as to its most probable effects on (1) restrictions placed on international trade and exchange transactions, (2) disequilibrating capital movements, and (3) inflationary or deflationary pressures on national price levels. Second, the underdeveloped countries could use the S.D.R.'s to directly transfer real resources from the more developed countries to themselves. This type of behavior will also be discussed as to its most likely effect on (1) restrictions placed on international trade and exchange transactions, (2) disequilibrating capital movements, and (3) inflationary or deflationary pressures on national price levels.

Behavior which would lead to a more efficient international monetary system

It is possible that the underdeveloped countries would use their allocations of S.D.R.'s to add to their stocks of international reserves to be used for meeting temporary deficits in their balances of payments and would reconstitute any of their losses over time. In this case, the direct allocation of S.D.R.'s to the underdeveloped countries would, ceteris paribus, result in a more efficient international monetary system.

Trade and exchange restrictions.--If the underdeveloped countries were to use their direct allocations of S.D.R.'s to add to their stocks of international reserves then, ceteris paribus, these countries would find it easier to remove existing or refrain from imposing additional artificial impediments to international trade (i.e., tariffs, quota restrictions, exchange controls, prohibitions, protective internal excise taxes, licenses, etc.). The additional ease with which underdeveloped countries would be able to liberalize their international trade policies as a result of an increase in their international reserves stems directly from the prime function of such reserves. Their prime function is, as was so well put by Ragnar Nurkse ". . . to serve as a buffer giving each country some leeway for the regulation of its national income and employment and providing it with a means to soften the impact of economic

fluctuations arising outside its borders."[19] For example, assume that a decline in the demand for an underdeveloped country's exports results in a deficit in its balance of payments. Other things remaining equal, the sequence of events in the underdeveloped country would be: a decline in exports, a decline in income and employment in the export industries, and a decline in income and employment throughout the economy until equilibrium is restored in the balance of payments. Such an occurrence would, of course, be in direct conflict with the major collective economic target of the underdeveloped countries (i.e., the attainment of a minimum annual rate of growth of aggregate national income of 5 percent by 1970).[20] Consequently, policy makers would exercise more expansionary economic policies in an

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[19]Nurkse, p. 11.

It has been suggested that international reserves also can be used for other subsidiary functions such as when ". . . structural changes in the economy are necessary because of permanent imbalances, the authorities can use reserves to help ensure a slower and more orderly path of adjustment. . . . In many cases, a certain percentage of official reserves is held to satisfy domestic legal reserve requirements. Also, it is likely that some reserves are held to maintain confidence abroad and some for purely conventional reasons." United Nations, Secretary-General, "The Adequacy of Reserves of Developing Countries in the Postwar Period: Note by the Secretary-General of UNCTAD," Doc. TD/B/34, November 10, 1965, contained in Annexes of the Official Records of the United Nations Conference on Trade and Development, Trade and Development Board, 3d Sess. January 25 to February 17, 1966 (New York, 1966), p. 25.

[20]United Nations, General Assembly Resolution 1710, 16th Sess., I, Supplement No. 17, par. 1, September 19, 1961-February 23, 1962 (New York, 1962), 17. Also see Sidney Weintraub, The Foreign-Exchange Gap of the Developing Countries ("Essays in International Finance," No. 48; Princeton: Princeton University Press, September, 1965).

attempt to offset the depressive balance-of-payments influences and achieve the desired level of expenditure, income, employment, and growth. Such policies might help achieve the domestic economic goals, but could not be expected to help reduce the balance-of-payments deficit. If the deficit country held an adequate amount of international reserves, it could use them to meet the obligations arising from its balance-of-payments deficit. On the other hand, if the deficit country did not have adequate international reserves to meet such obligations and refused to enforce more restrictive economic policies because of goal priorities, it would be forced to seek adjustment either by means of exchange depreciation or trade and exchange restrictions.

Since this analysis is being carried out within the basic framework of the present international monetary system, frequent exchange depreciation as an adjustment to balance-of-payments deficits will not be considered. Other than more restrictive economic policies, this leaves exchange and trade restrictions as an alternative response. It therefore seems that if underdeveloped countries had larger as opposed to smaller stocks of international reserves, they would, ceteris paribus, find the removal of existing artificial impediments or the avoidance of imposing additional impediments to international transactions easier to achieve.[21]

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[21]It can furthermore be argued that underdeveloped countries actually need a relatively larger stock of international reserves to meet temporary balance-of-payments

Disequilibrating capital movements.--If the underdeveloped countries use the S.D.R.'s to build up their stocks of international reserves and reconstitute their losses of S.D.R.'s in a manner which reflects the rate of growth in their international transactions, then, in itself, the direct allocation of S.D.R.'s to the underdeveloped countries would not lessen confidence in these assets themselves anymore than would the direct allocation of S.D.R.'s to the developed countries. Assume that the underdeveloped countries do behave toward their S.D.R.'s in this manner. As a result, other countries would realize, or come to realize, that when they exchange real goods and services for the S.D.R.'s formerly held by the underdeveloped countries, these S.D.R.'s represent claims on the real goods

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deficits than do the developed countries. For example, the Group of Experts on International Monetary Issues established by the United Nations Conference on Trade and Development argued that "The liquidity requirements of developing countries are greater relatively to their imports than those of the developed countries. Prices of primary commodities exported by developing countries tend to be subject to far wider short-term disturbances than the prices of manufactures exported by developed countries. This, together with the greater susceptibility of agricultural products to fluctuations in volume, make the developing countries particularly vulnerable to destabilizing influences of a short-term character." United Nations, Conference on Trade and Development, International Monetary Issues and the Developing Countries, Report of the Group of Experts on International Monetary Issues (TD/B/32; TD/B/C.3/6) (New York, 1965), p. 9. Other such arguments center around the growth goals of the underdeveloped countries and the likelihood that efforts to achieve these goals will induce a "foreign exchange gap" requiring additional reserves for the underdeveloped countries. Poul Høst-Madsen, "Balance of Payments Problems of Developing Countries," The Fund and Bank Review: Finance and Development, IV, No. 2 (June, 1967), 118-24. Also see Weintraub, passim.

and services of other countries which can be obtained within the multilateral system. In fact, if the underdeveloped countries are to reconstitute the reserves which they lose, they must do so by achieving balance-of-payments surpluses. These surpluses, ignoring foreign grants, aid, loans, investments, etc., must be the result of offering desired goods and services to other countries on a competitive basis. If the S.D.R.'s temporarily transferred to other countries by the underdeveloped countries represent claims on such goods and services, there seems to be no reason why their relative scarcity and value would be adversely affected by their direct allocation to the underdeveloped countries. If these conditions of behavior are met, it would seem reasonable to conclude that the direct allocation of S.D.R.'s to the underdeveloped countries would not tend to lessen confidence in the new assets or tend to set off speculative movements away from the S.D.R.'s.

Inflationary and deflationary forces.--It is, of course, realized that a too rapid allocation of S.D.R.'s on a worldwide basis would tend to be inflationary. On the other hand, if gold and foreign exchange cannot meet future needs for international reserves, an expansion of the S.D.R.'s which is too slow would tend to be deflationary. Fortunately this analysis need not be concerned with establishing a "correct rate" of creation for the S.D.R.'s. On this particular point it can be assumed that they will

be created at an overall rate which would be neither deflationary nor inflationary in itself. Then the more limited question can be raised of whether or not the direct allocation of some portion of the S.D.R.'s to the underdeveloped countries would result in deflationary or inflationary forces. The historical performance of the underdeveloped countries very strongly indicates that their attainment of additional reserves is highly unlikely to set off any deflationary forces.[22] The same is not, of course, necessarily true in regard to inflation. Nevertheless, the answer to this particular question would seem to turn on the use made of the additional reserves by the underdeveloped countries.

The underdeveloped countries could add the S.D.R.'s to their stocks of international reserves and fully reconstitute any reserve losses over time. In order to do this, other things remaining equal, they would have to keep the rate of increase in their domestic price levels, as seen through the foreign exchange rates, in a general equality with the domestic price levels of their trading partners. If this condition were to be met, then a proportionate allocation of some given amount of S.D.R.'s to the underdeveloped countries would not, in itself, result in additional inflationary pressures.

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[22]However, there is one special case in which the direct allocation of S.D.R.'s to the underdeveloped countries could have a deflationary effect on the domestic economies of the underdeveloped countries. For a brief discussion of this case see pages 85-86.

Behavior which would lead to a less efficient international monetary system

On the less favorable side, it is possible that the underdeveloped countries would quickly draw down and fail to reconstitute any S.D.R.'s which might be allocated to them. In this case, the direct allocation of S.D.R.'s to the underdeveloped countries would, ceteris paribus, result in a less efficient international monetary system.

Trade and exchange restrictions.--Suppose the underdeveloped countries decide that holding the S.D.R.'s to meet temporary balance-of-payments deficits represents an opportunity cost in terms of foreign goods and services which they are unwilling to accept. Such an attitude is certainly not inconceivable given the relative real incomes and the extremely intense desires for improved standards of living which prevail in these countries. The S.D.R.'s could be drawn down directly as a result of increased government expenditures abroad. Alternatively the S.D.R. loss might come about indirectly as a result of more expansionary monetary and fiscal policies. The means is not of major importance on this point. Either way, if the underdeveloped countries continuously drew down their S.D.R.'s while the developed countries accumulated ever larger stocks of these assets, the result would be a net transfer of real goods and services from the developed countries to the underdeveloped countries. Such a transfer might be desirable on other grounds, but if it were to take place by these means, it would do nothing to improve and

would most probably deter the achievement of a more efficient international monetary system.

The underdeveloped countries would, by attaining the additional goods and services in this manner, raise their levels of real income. However, the reserves held by these countries would then be, other things remaining equal, back to their original levels (i.e., the levels which existed before the S.D.R.'s were allocated). Such a situation could lead to additional trade and exchange restrictions from two directions. First, larger absolute, though not necessarily relative, fluctuations in their payments balances would likely be associated with the larger real incomes. Second, the higher levels of real income may become accepted as the norm, and a reduction in income from the higher levels for balance-of-payments purposes may prove to be just as difficult to achieve as an equal reduction from lower levels.[23] In view of these forces it is quite likely that the pressures on the balances of payments will remain strong. Consequently, the pressures for trade and exchange restrictions might well remain as strong, if not stronger, after the transfer of real goods and services by means of the S.D.R.'s has been achieved as they were before the transfer.

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[23]See J. S. Duesenberry, Income, Savings, and the Theory of Consumer Behavior (Cambridge: Harvard University Press, 1949); Franco Modigliani, "Fluctuations in the Savings-Income Ratio: A Problem in Economic Forecasting," Studies in Income and Wealth, XI (New York: National Bureau of Economic Research, 1949), 371-441.

There is, of course, always the possibility that the underdeveloped countries might devote the goods and services acquired by means of the S.D.R.'s into real investment which could be directed at increasing exports and export earnings. However, there is nothing about the direct allocation of S.D.R.'s to these countries which would in itself bring about the needed increase in their peoples' propensities to save.[24]

It therefore seems likely that the direct allocation of newly created reserve assets to the underdeveloped countries would do little if anything to reduce the resort to exchange and trade restrictions by the underdeveloped countries if they allow such allocations to be quickly used and fail to reconstitute them. Furthermore, it is conceivable that the developed countries would, upon recognizing the unintended flow of their real goods and services to the underdeveloped countries, react in a restrictive fashion.

Disequilibrating capital movements.--One of the more serious possible consequences of this type of behavior toward the S.D.R.'s is the possibility that uncertainty may arise in the minds of central bankers or even private speculators over the ability of the S.D.R.'s value to be maintained vis-à-vis gold, the dollar, etc. If this uncertainty is allowed to exist, it may ultimately manifest

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[24]See Ragnar Nurkse, Problems of Capital Formation in Underdeveloped Countries (New York: Oxford University Press, 1953), pp. 89-97.

itself by means of speculative shifts from the S.D.R.'s to gold or key currencies. Shifts out of the S.D.R.'s to other forms of international reserves would tend to lower the relative value of the S.D.R.'s and justify the speculative shifts. Such movements could become cumulative and result in a severe disruption of the international monetary system and world trade.

A lack of confidence in the S.D.R.'s could result from the underdeveloped countries continually using these assets to draw real goods and services from the more developed countries. It must be kept in mind that the creation of the S.D.R.'s would be a continuing rather than a one step process. The continuing allocation would supposedly be dictated by the continuing growth in international transactions. This means that the underdeveloped countries would have a continuing inflow of S.D.R.'s which they could attempt to exchange for the goods and services of other countries. Furthermore, under the plan to create special drawing rights, which is presently being considered by members of the I.M.F., a country can continually use 70 percent of its S.D.R.'s without facing any reconstitution requirement. The reconstitution provisions are made even more liberal by averaging net drawings over a 5-year period for purposes of deciding whether or not the 70 percent limit has been exceeded.

If the underdeveloped countries try to use these terms to their own short-run advantage by continually drawing

down and failing to reconstitute their allocations of S.D.R.'s, all of these assets will tend to end up with the monetary authorities of the more developed countries. Under such conditions the developed countries would probably find their accumulated S.D.R.'s to be of little use in drawing against the underdeveloped countries for two reasons. First, if the I.M.F. should direct drawings to the underdeveloped countries, it would be in the illogical, if not impossible, position of directing drawings against countries in deficit or weak reserve positions. Second, even if the drawings are directed against the underdeveloped countries, the currencies which the underdeveloped countries would provide are likely to be less acceptable than gold or currencies of the more developed countries. The scheme provides that the countries drawn against must provide currencies to the drawing country which are "convertible in fact."[25] The most probable meaning of a convertible currency in this sense is a currency which can be freely exchanged at a given rate into another currency which is convertible into gold. Regardless of how convertible the currencies of the underdeveloped countries may presently be, if they were placed in the world market to reabsorb large backlogs of S.D.R.'s, their exchange rates would undoubtedly fall. It is likely that the fall in rates would be accompanied by speculation prompted by expectations of

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[25]U.S., Congress, New Plan for International Monetary Reserves, Part 1, p. 4.

further declines and attempts to move out of the special drawing rights. The intensity of the speculation would probably vary directly with the amount of S.D.R.'s which the developed countries had previously accumulated from the underdeveloped countries.

Of course the developed countries could use the S.D.R.'s to settle obligations among themselves, but over time they would be absorbing more and more of these drawing rights from the underdeveloped countries in return for real goods and services. One developed country could try to direct them to other developed countries, but all developed countries might soon reach the same position of having all the S.D.R.'s which they desired to hold. The plan now under consideration by the I.M.F. proposes that no country need obligate itself to hold S.D.R.'s in an amount over twice its own allocation. This would place a negotiated limit on the necessary holdings even though it would be an expanding limit. Before this limit was reached, however, the developed countries might become reluctant to continually accept what amounted to uncollectable obligations of the underdeveloped countries on a par with gold or claims on the currencies of other developed countries. If this happened and the S.D.R.'s fell or threatened to fall to a discount relative to gold, the dollar, or the pound, etc., speculative movements away from the S.D.R.'s would probably result. These movements would not be likely to occur in the form of a direct run on the

I.M.F. Even though the S.D.R.'s would have a type of "gold guarantee," the I.M.F. itself would not be obligated to convert them into gold or key currencies. The underdeveloped countries would only be obligated to provide additional amounts of their own currencies. Therefore, most speculative movements would probably result in attempts of developed countries to place S.D.R.'s with other developed countries in exchange for gold and key currencies. The result of such attempts would be a depreciation in the value of the S.D.R.'s. As was pointed out earlier, a depreciation in the value of the drawing rights would, of course, reduce the value of any country's stock of international reserves if S.D.R.'s composed a part of that country's reserves. This loss of value would affect any country holding S.D.R.'s including key currency countries. In the atmosphere of uncertainty and speculation which would accompany the depreciation of the S.D.R.'s, disequilibrating short-term capital movements not unlike the "hot money" movements of the 1930's could very easily be set off.

It is, of course, possible that the developed countries might receive and hold the maximum amount of special drawing rights which they had obligated themselves to without the S.D.R.'s falling to a discount or any speculative movements occurring. Even if this should happen, the potential problem would not be eliminated. Over time the maximum obligations of the developed countries would

increase. The developed countries might then balk at receiving additional S.D.R.'s from the underdeveloped countries.

In the preliminary negotiating of the drawing rights agreement France has continually argued that each participant be given the right to decide whether or not it will accept any additional allocations made to it. That is, it wishes to be entitled to "opt out" from the first or any subsequent allocations.[26] Whether or not this right is explicitly given is not of great significance. The I.M.F., in fact, lacks the necessary authority to force countries to accept additional allocations. Therefore any country could, in reality, "opt out" at will. The refusal of any major power to accept the special drawing rights would almost certainly reduce their international acceptability and induce speculative movements from the S.D.R.'s.

Inflationary and deflationary pressures.--The possibility that the direct allocation of the S.D.R.'s to the underdeveloped countries could result in additional inflationary pressures on world prices is directly related to the preceding discussion. If the underdeveloped countries desired to use their allocations of these assets for the purposes of acquiring real goods and services from the developed countries, some mechanism of transfer would

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[26]Schweitzer, International Financial News Survey, XX, No. 17, 138.

be required. One simple mechanism would be for the governments of the underdeveloped countries directly to purchase foreign goods and services with the currencies acquired from the S.D.R.'s. When these real goods and services found their way into the domestic economies of the underdeveloped countries, they would satisfy some demands which otherwise would have had to be met through domestic production, foreign grants, or earned imports. Goods obtained in this fashion would, ceteris paribus, have a deflationary effect on the domestic economies of the underdeveloped countries.

An alternative method of drawing the goods and services from the developed countries would be for the underdeveloped countries to exercise economic policy which would allow domestic demand to expand and, consequently, the domestic demand for imports to increase. The foreign currency claims obtained from use of the S.D.R.'s could then be made available for use by the private sector to help satisfy its demand for imports. The net effect of such policy on the domestic economies of the underdeveloped countries would have to be considered as inflationary.

If the underdeveloped countries were to continuously transfer their drawing rights to the developed countries, this action would result in a situation which would at least be potentially inflationary for the developed countries in two respects. In the first place, the additional foreign expenditures for the exports of the

developed countries would increase the effective demand in those countries. This would be true regardless of how the increased import demand came about in the underdeveloped countries. In the second place, the additional holdings of S.D.R.'s by the developed countries would tend to be inflationary just as any increase in their international reserves would be. It is, of course, quite possible that the developed countries would exercise economic policy to maintain the existing levels of effective demand in their domestic economies even though they had received greater amounts of international reserves and the demand for their exports increased. Nevertheless, the potential for inflation would have increased for the developed countries.

Summary.--The preceding discussion leads to the conclusion that if S.D.R.'s were directly allocated to the underdeveloped countries and if these countries would hold, use, and reconstitute these assets as international reserves, then such allocations could help improve the efficiency of the international monetary system. On the other hand, if the underdeveloped countries were to use their allocations to draw down real goods and services from the developed countries and failed to reconstitute their allocations, then the direct allocation of S.D.R.'s to the underdeveloped countries would, in all likelihood, be detrimental to the efficiency of the international monetary system. It furthermore seems evident that if any plan or agreement to create a new form of international reserves is

to be successful, a high degree of international cooperation in matters of economic policy among all participating countries will be necessary. The more developed countries have, of course, realized for some time that a high degree of such cooperation among the major economic powers is required for any international monetary system to function efficiently. However, such cooperation among the developed countries has generally proven difficult to obtain and has so far been impossible to maintain continuously. The task will be made all the more difficult if similar cooperation from the underdeveloped countries with their extremely ambitious goals of economic growth is also made a prerequisite to the efficient functioning of the international monetary system.

CHAPTER III

THE PROBABLE BEHAVIOR OF UNDERDEVELOPED COUNTRIES TOWARD DIRECT ALLOCATIONS OF NEWLY CREATED INTERNATIONAL RESERVE ASSETS

The preceding chapter attempted to establish the relevance of the question: What would underdeveloped countries be likely to do with any newly created reserve assets which were directly allocated to them? This chapter will attempt to answer that question.

Although widely differing opinions have been expressed as to the probable behavior of the underdeveloped countries toward such reserves, in general two lines of thought may be distinguished: the first being that the underdeveloped countries would treat such allocations as international reserves with any losses to be reconstituted in due course; the second being that the underdeveloped countries would quickly use the allocations to obtain real goods and services from other countries and fail to reconstitute them.

Some Opinions

The first line of reasoning, though somewhat qualified, was expressed in a 1965 United Nations publication entitled International Monetary Issues and the Developing Countries, a report of the Group of Experts on International

Monetary Issues.[1] The conclusions stated in this document were endorsed by the representatives of underdeveloped countries and can be thought of as being generally representative of their position.[2] This report pointed out that while the developing countries have a very great need for long-term development aid, they also have an acute need for short-term resources or liquidity which

> . . . may be expected to rise with the growth in their economies and external transactions. The question is whether they would keep additional reserves if these were given to them. Statistics of the past are a poor guide for answering this question, because the post-war drop in the developing countries' reserves as a proportion of their imports does not reflect a uniform tendency but is the result of the different behaviour of different countries under very different circumstances. Some developing countries accumulated large excess reserves during the war and were well advised to spend these for development purposes; others used in this way excess reserves gained during the Korean war boom. . . . Some countries suffered from the misfortune of export shortfalls before they had time sufficiently to develop and diversify their economies; others again have drawn down reserves,

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[1]United Nations (TD/B/32; TD/B/C.3/6) (1965). The Group of Experts on International Monetary Issues was convened in accordance with the Final Act of the first session of the United Nations Conference on Trade and Development. See United Nations, Proceedings of the United Nations Conference on Trade and Development, Final Act and Report (E/CONF.46/141, Vol. I) (New York, 1964), p. 53.

[2]United Nations, Trade and Development Board, United Nations Conference on Trade and Development, "Continuation of the Discussion on Item 9 of the Agenda of the First Part of the First Session (Consideration of the Report of the Group of Experts on International Monetary Issues) [TD/B/32]," Report of the Committee on Invisibles and Financing Related to Trade on Its Special Session 27 January - 4 February 1966, Official Records 3d Sess., Supplement No. 4 (TD/B/57/Rev.1 and TD/B/C.3/18/Rev.1) (Geneva, 1966), pp. 3-5.

> sometimes improvidently, for the sake of development and occasionally also for financing welfare schemes or other forms of current consumption. . . . Some countries that had drawn down but planned to reconstitute their reserves out of export proceeds must have found it very difficult to do so when unforeseen declines in commodity prices occurred. And since the trend in terms of trade was downwards, during the 1950's, it was not unnatural to find many countries caught in the position where any planned rebuilding of reserves could take place only by cutting into essential imports of development goods. We also note that many developing countries have managed and preferred to retain adequate reserves. During 1960-64, a period of relative stability of export prices, more than half of the developing countries for which data are available were building up their reserves.[3]

While noting the difficulty of generalization, the Group of Experts stated:

> . . . we believe that most developing countries are conscious of the advantages of having adequate reserves and could be expected to try and retain these advantages. Conditions for their retention would be more favourable if the pressure of competing demands on international means of payment were lessened, and if special provisions were made for dealing with particulary difficult situations.[4]

Others, however, have expressed the opinion that the underdeveloped countries are almost certain to quickly draw down and fail to reconstitute any reserve assets which they are allocated. Concern was expressed over this possibility in the early 1940's when plans for the creation of the International Monetary Fund were under consideration.[5] The

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[3]United Nations (TD/B/32; TD/B/C.3/6) (1965), pp. 10-11.

[4]Ibid., p. 11.

[5]See Hansen, pp. 75-83; Benjamin M. Anderson, Postwar Stabilization of Foreign Exchange: The Keynes-Morgenthau Plan Condemned, Outline of a Fundamental

reasons for this concern, which are as applicable in the 1960's as they were in the 1940's, were expressed by Nurkse:

> Some countries . . . given their resources and preference schedules, may feel that they cannot afford to hold the amount of reserves necessary for the maintenance of free and stable exchanges. A reserve which a rich country might consider just sufficient might, to a poor country, seem a luxury beyond its means.
>
> It is the unequal distribution of wealth and the unequal economic requirements of different nations that largely account for the maldistribution of international currency reserves in the past. It is these fundamental conditions that are apt to distort or even wreck any system of international currency reserves, including such facilities as are to be provided by the International Monetary Fund. Unless, therefore, something is done to change the underlying conditions there may not be much hope of preventing a new distortion or breakdown of the international reserve system and a new maldistribution of liquid reserves.[6]

That such a position still has support is demonstrated by this quotation from a statement by Henry C. Wallich:

> Many developing countries . . . have no true demand for additional liquidity. Precisely because they are so hard pressed for real resources, they are likely to spend any increment in liquidity, putting undesirable pressure upon the resources of the surplus countries.[7]

The Inadequacy of Previous Analyses

Most of those who have touched upon this question support their positions with highly abstract reasoning even though in some cases empirical observations which are several

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Solution (New York: Economist's National Committee on Monetary Policy, 1943), pp. 11, 23; and Riddle, pp. 10-14.

[6]Nurkse, Conditions of International Monetary Equilibrium, pp. 16-17.

[7]Wallich, p. 78.

times removed from the actual question have been used for support. A very limited number of investigations have attempted to provide empirical evidence of the past behavior of underdeveloped countries toward their international reserves. Most of these studies were undertaken to provide information about the adequacy of the present level of international reserves and the probable future needs for additional reserves.

Almost without exception those writers who try to quantify the "need" for international reserves calculate, for a long series of years, ratios of international reserve quantities to quantities of certain items which are supposed to be related in some manner to the "need" for international reserves. Most popular among items used as the denominator in these ratios is the value of goods imported over a certain period of time.[8] Such ratios are calculated for individual countries and on a world basis. On an individual country basis reserve stocks are also compared to the domestic money supply, imports plus capital outflows, or the amount of foreign liabilities. On a world basis,

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[8]See United Nations (TD/B/34) (1966), pp. 25-28; International Monetary Fund, International Reserves and Liquidity, A Study Prepared by the Staff of the International Monetary Fund (Washington: International Monetary Fund, 1958), pp. 14-66; "The Adequacy of Monetary Reserves," International Monetary Fund Staff Papers, III, No. 2 (October, 1953), 181-227; Triffin, Gold and the Dollar Crisis, pp. 38-46; and International Monetary Fund, "International Liquidity and Reserve Creation," 1966 Annual Report of the International Monetary Fund (Washington: International Monetary Fund, 1966), pp. 9-20.

comparisons are made of reserve stocks to total world trade or world production; or the growth rate of international reserves is compared to that of trade, production, and the like.[9]

Those who make these calculations usually fail to offer a rigorous explanation as to why they chose a particular stock or flow to compare with reserve quantities, and they have drawn criticism for this deficiency.[10] Yet calculations of these same ratios apparently represent the total effort thus far expended in attempting to produce any quantitative measurement of past behavior which might provide a basis for predicting what underdeveloped countries would do with direct allocations of newly created reserve assets.[11]

Aside from the fact that the calculation of these ratios yield results which are inconsistent in regard to each other, they are simple comparisons of reserve holdings to certain other magnitudes which do not fully reflect the primary function of international reserves. International

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[9]Willis and Springborn, pp. 1-41; United Nations (TD/B/34) (1966), pp. 28-40; and Robert Triffin, Our International Monetary System: Yesterday, Today, and Tomorrow (New York: Random House, 1968), pp. 88-95.

[10]See Oscar L. Altman, "Professor Triffin on International Liquidity and the Role of the Fund," International Monetary Fund Staff Papers, VIII, No. 2 (May, 1961), 164 and Machlup, The Need for Monetary Reserves.

[11]United Nations (TD/B34) (1966), pp. 23-40 and International Monetary Fund, 1966 Annual Report . . . , pp. 12-17.

reserves are used to meet balance-of-payments deficits. This is the only rational reason for holding them. Of course such things as import volumes, export fluctuations, capital flows, etc., are all factors in the determination of the amount of reserves a country gains or loses over a period of time. But it is the net balance on both the current and capital account that determines the size of the deficit or surplus. Receipts are just as important as payments; and net flows of funds for investment, aid, or gifts are just as important as visible items in determining the overall net balance. The comparison of a single balance-of-payments component, such as imports, to reserve holdings could serve as an indicator of how well a country prepares for contingent reserve losses only if the magnitude of the component chosen is highly correlated over time with the size of the deficits which that country experiences in its balance of payments. However, it is impossible to find such a correlation within the balance-of-payments statements of a single country to say nothing of the impossibility of finding any one balance-of-payments component which would universally exhibit such a relationship with balance-of-payments deficits. The same can be said of attempting to find groupings of balance-of-payments components which would be highly correlated with balance-of-payments deficits.

A Measure of Individual Countries' Policies Toward International Reserves Based on the Most Rational Function of Such Reserves

The net balance of a country's total independently motivated[12] international transactions over a certain period of time is equal to the amount of international reserves which it has gained or lost over the same period of time (its compensatory transactions). This is a result of the double entry method of bookkeeping used in formulating balance-of-payments statements. That is to say, if all of the balance-of-payments entries representing a country's independently motivated transactions (i.e., all entries representing transactions other than those denoting transfers of international reserves) are netted, the resulting balance must by definition be equal to the net gain or loss in reserves experienced by that country. This being the case, it would seem that a comparison of past reserve holdings with past overall balance-of-payments deficits would provide an indication of how well a country has previously prepared itself to meet its balance-of-payments deficits. Behavior patterns established from comparing previous reserve holdings to past balance-of-payments deficits could be used as a basis for making

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[12] Yeager, p. 46.
The terms "independently motivated" and "compensatory" transactions are used in essentially the same sense as J. E. Meade's terms "autonomous" and "accommodating" transactions except "compensatory" transactions are officially provided or arranged for while "accommodating" transactions can emanate from the private as well as from the public sector. See J. E. Meade, "The Balance of Payments," The Theory of International Economic Policy, I (London: Oxford University Press, 1951), 11.

predictions about a country's probable future behavior in this matter. More specifically, previous reserve holdings can be compared to past balance-of-payments deficits for both developed and underdeveloped countries in an attempt to discern the differences or similarities in the behavior patterns which the two groups of countries have previously exhibited in preparing for balance-of-payments deficits by accumulating international reserves.

One problem involved with an attempt to establish the behavior patterns in the manner just discussed is that all countries do not compute deficits or surpluses in the same manner for purposes of statistical presentation.[13] Fortunately, however, quarterly data of international reserve holdings are available for most countries. Since changes in a country's holdings of international reserves will be equal to its balance-of-payments surplus or deficit as determined on an official settlements or a strict "overall" balance concept, the problem arising from countries defining deficits or surpluses in different ways can be circumvented.[14] Reserve holdings can be compared to

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[13]Poul Høst-Madsen, "Asymmetries Between Balance of Payments Surpluses and Deficits," International Monetary Fund Staff Papers, IX, No. 2 (July, 1962), 182-99 and Fritz Machlup, "Three Concepts of the Balance of Payments and the So-Called Dollar Shortage," The Economic Journal, LX (March, 1950), 46-68.

[14]An "overall" deficit or surplus is defined in the strict sense as ". . . the balance that is matched by financing by monetary authorities in response to the

past reserve losses in order to determine how well individual countries have previously been prepared to meet reserve losses actually incurred. These findings can then be used as one indicator of the degree to which individual countries are likely to provide for reserve losses in the future by building up reserve holdings and maintaining stocks of international reserves.

An Analysis of the Behavior Previously Exhibited by Developed and Underdeveloped Countries Toward International Reserves

Aperçu

In order to compare reserve holdings to reserve losses, time series of individual countries' holdings of international reserves were established. The period chosen for analysis begins with the 1st quarter of 1952 and ends with the 1st quarter of 1968. Observations were made on a quarterly basis.

Peaks and troughs were established in each country's time series. Cumulative losses of reserves were measured from peaks to troughs. Reserve holdings at the peak preceding the largest loss, reserve holdings at the peak following the largest loss, and reserve holdings as of

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balance of payments." Høst-Madsen, International Monetary Fund Staff Papers, IX, No. 2, 185.

It should be noted that while the terms "overall" and "official settlements" are sometimes used to refer to deficits or surpluses in the U.S. balance of payments, these terms generally have different denotations for the U.S. balance of payments than they have in regard to those of other countries.

March 31, 1968 were each expressed as a percentage of the largest loss for each country. This process was repeated for the 2nd and 3rd largest losses.

The percentage ratios of reserve holdings at a peak to the following loss indicate the degree to which individual countries were prepared to meet the subsequent loss by drawing from their stock of reserves.[15]

The percentage ratios of reserve holdings at a peak to the loss which preceded that peak indicate the degree to which each country reconstituted its reserves relative to the preceding loss.

The reserve holdings as of March 31, 1968 were expressed as percentages of the past losses in order to give an indication of how well countries are currently prepared to meet losses of the magnitudes which have occurred since 1952. This measure is, of course, biased in an upward direction since countries' holdings of international reserves as well as the magnitudes of their reserve losses have, in general, trended upward since 1952.

Techniques and definitions used in the analysis

Period studied.--Between 1914 and 1952 the total volume of international reserves, their distribution among

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[15]Ratios of reserves held at a trough to the loss which terminated at that trough were not calculated. The calculation of these ratios does not seem necessary since in all cases they will be equal to the percentage ratios of the reserves held at the peak preceding the trough to the following loss minus 100 percent.

countries, and the fluctuations in individual countries' holdings of international reserves were often most strongly influenced by exogenous forces. It is, of course, impossible to find an extended period in which such forces were entirely absent. However, this analysis attempts to establish behavior patterns toward international reserves which primarily reflect policy decisions made in the absence of overriding exogenous forces. It therefore seems that little can be gained from observing fluctuations in international reserves over the period extending through World War II or even through the two years in which the Korean conflict had its greatest effect on international economic conditions.[16]

The period beginning with the 1st quarter of 1952 and ending with the 1st quarter of 1968 was chosen for this study. It is, of course, realized that no past period will provide examples of behavior patterns of any type which can be extrapolated into the future without qualification. Nevertheless, the 1952-1968 period seems most suitable for purposes of this paper.

Frequency of observation.--Holdings of international reserves were observed at the end of each quarter. This frequency was chosen because (1) quarterly reserve data is

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[16] International Monetary Fund, International Reserves and Liquidity, pp. 1-40.

Another reason for not dealing with the pre-Korean conflict years is the inadequacy of data concerning international reserves prior to the early 1950's.

available for most countries and (2) it allows seasonal variations to be considered.

Definition of international reserves.--For purposes of this paper a country's international reserves are defined to include the sum of gold held by its monetary authorities, its I.M.F. gold or super gold tranche, and its official foreign exchange holdings. Official foreign exchange holdings are defined here as they are by the International Monetary Fund as

> . . . holdings by monetary authorities (central banks, currency boards, exchange stabilization funds, and Treasury holdings to the extent that treasuries perform similar functions) of bank deposits, Treasury bills, short and long-term government securities, and similar items when denominated in convertible currencies.[17]

Availability and consistency of quarterly international reserve data.--Figures of quarterly international reserve holdings for most countries are made available in the International Monetary Fund publication International Financial Statistics. The time series of international reserve holdings established from this publication are not thoroughly consistent. However, the I.M.F. revises the reserve data periodically in order to minimize its inconsistencies. These revisions are published in Supplements to International Financial Statistics. These two publications were used in conjunction in an attempt to minimize the inconsistencies in the time series selected

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[17]International Monetary Fund, International Financial Statistics, XXI, No. 6 (June, 1968), 14.

for use in this analysis. Nevertheless, some technical breaks which interrupt the comparability of the data remain in the time series of some countries. However, data on either side of such a break still form a series which may be considered consistent for analytical purposes. Of course, if any such technical break in the data occurred during the period in which a cumulative loss was observed, that loss had to be disregarded. Fortunately, such occurrences were few. Quarterly reserve data were not available for all countries studied beginning in 1952 because of inadequate reporting and the political realignment of countries.

The following is a grouping of countries dealt with in this study according to the completeness of the time series describing their quarterly holdings of international reserves. Exclusion of some cumulative losses because of technical breaks in the data are noted in the footnotes accompanying the groupings.

TABLE 1

COUNTRIES FOR WHICH QUARTERLY RESERVE DATA IS AVAILABLE FROM THE 1ST QUARTER OF 1952

Australia	Honduras
Austria	Iceland
Belgium	Iran
Bolivia[a]	Iraq
Brazil	Lebanon
Burma	Mexico
Canada[b]	Netherlands
Ceylon	New Zealand
Chile	Nicaragua
Colombia	Norway
Costa Rica	Peru
Denmark	Philippines
Dominican Republic	South Africa
Ecuador	Sweden
El Salvador	Thailand
Guatemala	Venezuela

[a]Bolivia: Technical break at 1st quarter of 1959.

[b]Canada: Not considered until 2nd quarter of 1963 due to floating exchange rate.

TABLE 2

OTHER COUNTRIES INCLUDED IN THE ANALYSIS AND THE DATES FOR WHICH THE TIME SERIES OF THEIR RESERVE HOLDINGS BEGINS

Country	Beginning Date of Time Series	
Argentina	4th	1955
Ethiopia	2nd	1956
Finland	3rd	1953
France[a]	4th	1956
Germany[b] (Federal Republic of)	4th	1956
Ghana	4th	1956
Greece	4th	1955
Haiti	4th	1956
India	4th	1955
Ireland	4th	1957
Israel	2nd	1953
Italy	4th	1960
Japan	4th	1956
Jordan	4th	1955
Korea	4th	1953
Kuwait	4th	1963
Libya	4th	1960
Morocco	1st	1955
Nigeria	4th	1960
Panama	4th	1952
Pakistan	4th	1957
Paraguay	4th	1956
Portugal	4th	1956
Saudi Arabia	4th	1960
Spain	4th	1957
Sudan	4th	1956
Switzerland	4th	1956
Syria	4th	1953
Tunisia	4th	1958
Turkey	4th	1955
United Arab Republic[c]	1st	1957
Uruguay	4th	1957
Yugoslavia	4th	1956

[a]France: Technical break in 4th quarter of 1957.

[b]Germany: Technical break in 4th quarter of 1960.

[c]United Arab Republic: Technical break in 3rd quarter of 1957 and in 1st quarter of 1961.

Deflation or inflation of international reserve figures.--The quarterly holdings of international reserves presented in International Monetary Fund publications are expressed in terms of the current dollar values of the period in which the observations were made. However, the prices of internationally traded goods and services have not remained constant over the 1952-1968 period. This, of course, means that a given dollar amount of international reserves would not necessarily cover the same excess of imports over exports of real goods and services at all times between 1952 and 1968.[18]

In order to compensate for variations in the purchasing power of international reserves each country's reserve holdings were deflated (or inflated) by yearly unit value (price) indexes for imports. The import price indexes used were those presented in the United Nations Monthly Bulletin of Statistics.[19]

The indexes are of the Paasche type:

$$I = \frac{\Sigma P_n Q_n}{\Sigma P_0 Q_n}$$

In the years 1952-1956 the indexes are obtained by revaluing current imports at the dollar prices of 1953. Beginning in 1956 the indexes are obtained by revaluing current trade at

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[18]For simplicity this example assumes that capital flows remain constant.

[19]See United Nations, "Special Features: World Trade: Index Numbers by Regions," normally contained in the January, April, July, and October issues only of Monthly Bulletin of Statistics, 1953-1968.

the dollar prices of 1959. The indexes are linked at the year 1956 and adjusted so that 1958 is represented by 100 percent.[20]

The price indexes of imports are not available for individual countries in every case but are available on an area basis. The time series in this analysis were adjusted by a separate import price index for Japan and separate import price indexes for the following groups of countries:

1. Africa: Central
2. Africa: Other African Countries Excluding South Africa
3. Asia: Sterling Asia
4. Asia: Other Asian Countries Excluding Japan
5. Australia, New Zealand, and South Africa
6. Latin America
7. North America
8. Middle East
9. Western Europe: European Economic Community
10. Western Europe: European Free Trade Association
11. Western Europe: Other Western European Countries

Establishment of peaks and troughs.--Before a loss in a country's holdings of international reserves can be quantified, it is obviously necessary to establish the higher level and the lower level of reserve holdings which will be compared to determine the magnitude of the reserve loss. In this analysis a trough in a country's international reserve time series is defined as a low point in that country's holdings of reserves which is not followed by a lower point within the next four quarters. A peak is

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[20]See United Nations, Supplement to the Monthly Bulletin of Statistics: Definitions and Explanatory Notes, 1963, pp. 115-20 and United Nations, Supplement to the Monthly Bulletin of Statistics: Definitions and Explanatory Notes, 1959, pp. 91-97.

defined as the highest point between two troughs. A cumulative reserve loss is defined as the difference between the level of reserves held at a peak and the level held at the following trough.

The use of this procedure means that an increase in a country's reserve holdings which is seasonal or random in nature will not define the end of a cumulative loss in reserves provided the reserves fall to a lower level than that which existed prior to the random or seasonal increase within four quarters of the previous low points occurrence. For example, assume a country holds $10,000 of international reserves at a peak and then loses reserves for ten consecutive quarters until it holds only $4,000 of reserves. Assume the country then gains $1,000 in reserves over the next two quarters and subsequently loses $2,000 of reserves over the next three quarters so that it then holds only $3,000 in reserves. If the reserve level does not fall below $3,000 for the next four quarters, $3,000 is defined as a trough in the country's holdings of reserves and the cumulative loss is held to have occurred over the entire fifteen quarters and amount to $7,000.

Classification of countries.--Before any type of comparison can be made between developed and underdeveloped countries it is, of course, necessary to decide which individual countries will be considered as developed and which will be classified as underdeveloped. It is not surprising that some sources refer to certain countries as

being developed while other sources classify the same countries as underdeveloped. A country is developed or underdeveloped only in relation to other countries. Furthermore, a country can be relatively developed or underdeveloped in many respects. This paper, however, is concerned only with the relative economic development of different countries. Even so there is no precise guideline by which we may separate developed from underdeveloped countries. Indeed, disagreement exists over which set or sets of statistical data should be used in comparing countries for this purpose.

From an abstract viewpoint an underdeveloped country could be defined as one which has not yet been able to mobilize a level of capital formation which is sufficient to allow it to achieve a self-sustaining rate of growth.[21] In practice, however, it is virtually impossible to apply such a criterion with precision.

Most writers rely on a comparison of per capita national incomes measured in some common currency and arbitrarily say that countries with per capita incomes greater than a certain amount shall be called developed countries. While this approach may seem both practical and useful, if it is applied without exception, the resulting classification will be open to serious criticism. For example, Kuwait would be designated as having the highest

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[21] See P. N. Rosenstein-Rodan, "International Aid for Underdeveloped Countries," The Review of Economics and Statistics, XLIII, No. 2 (May, 1961), 107.

level of economic development in the world. It would seem, therefore, that other criteria such as income distribution, capital formation, private consumption expenditure, etc., should be used along with the national income per capita measure. Because the addition of each criterion means the use of another value judgment, even the most thorough attempts at screening the developed from the underdeveloped countries will yield arbitrary results. In view of this, it seems most useful for purposes of this paper to rely on the customary classification of countries which has been universally presented in the United Nations Monthly Bulletin of Statistics.[22] This classification is as follows:

Economic Class I (Developed Countries)

- Australia
- Canada
- Japan
- New Zealand
- South Africa
- United States
- Western Europe

  - Common Market

    - Belgium-Luxembourg
    - France
    - Federal Republic of Germany
    - Italy
    - Netherlands

---

[22] United Nations, Monthly Bulletin of Statistics, May, 1968, pp. 102-107.

Free Trade Area

Austria
Denmark
Norway
Portugal
Sweden
Switzerland
United Kingdom

Other

Finland
Greece
Iceland
Ireland
Spain
Turkey
Yugoslavia

Economic Class II (Underdeveloped Countries)
This list includes only those countries for which enough quarterly reserve data is available so that at least two cumulative losses can be defined. In every case it was found that at least six consecutive years of quarterly data were required to meet this condition.

Africa

Ghana
Morocco
Nigeria
Tunisia

Latin America

Argentina
Bolivia
Brazil
Chile
Colombia
Costa Rica
Dominican Republic
Ecuador
El Salvador
Guatemala
Haiti
Honduras
Mexico
Nicaragua
Panama
Paraguay
Peru
Uruguay
Venezuela

Middle East

Ethiopia
Iran
Iraq
Israel
Jordan
Kuwait
Lebanon
Libya
Saudi Arabia
Sudan
Syria
United Arab Republic

Asia

Burma
Ceylon
India
Pakistan
Philippines
South Korea
Thailand

This classification is, of course, still subject to question. Especially vulnerable is the classifying as developed countries some of the less industrialized countries of western Europe--Ireland, Iceland, Finland, Greece, Turkey, Spain, Portugal, Yugoslavia. Accordingly, the following distinction is made among the Economic Class I Countries:[23]

Developed Market Economies

Belgium-Luxembourg
Canada
Federal Republic of Germany
France
Italy
Japan
Netherlands
Sweden
Switzerland
United Kingdom of Great Britain and Northern Ireland
United States

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[23]United Nations (TD/B/34) (1966), p. 27. See also United Nations, Monthly Bulletin of Statistics, May, 1968, pp. 102-107.

Other High Income Countries

Australia
Austria
Denmark
Finland
Greece
Iceland
Ireland
New Zealand
Norway
Portugal
South Africa
Spain
Turkey
Yugoslavia

One other subgrouping of underdeveloped countries would seem useful. This grouping is dictated by the fact that six of the underdeveloped countries are major exporters of oil:

Underdeveloped Countries Which are Major Oil Exporters[24]

Iran
Iraq
Kuwait
Libya
Saudi Arabia
Venezuela

With the exception of the United States and the United Kingdom all of the 67 countries in the groupings just listed are included in this analysis. The United States and the United Kingdom were excluded from the analysis because of their unique positions in the present international monetary system as the major key currency countries.

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[24]International Monetary Fund, 1966 Annual Report . . . , p. 13.

Results of the analysis

In this section an attempt is made to summarize, according to country classification, the patterns which were found in the time series of individual countries' holdings of international reserves.

In accordance with the rationale set forth on page 99, frequency distributions of countries were made according to:

1. the percentage ratio of international reserves which they held at the peak preceding their largest cumulative loss of international reserves to that loss (see Table 3 and Figure 1 on pp. 118 & 119);

2. the percentage ratio of international reserves which they held at the peak preceding their 2nd largest cumulative loss of international reserves to that loss (see Table 4 and Figure 2 on pp. 122 & 123);

3. the percentage ratio of international reserves which they held at the peak preceding their 3rd largest cumulative loss of international reserves to that loss (see Table 5 and Figure 3 on pp. 126 & 127);

4. the percentage ratio of international reserves which they held at the peak following their largest cumulative loss of international reserves to that loss (see Table 6 and Figure 4 on pp. 130 & 131);

5. the percentage ratio of international reserves which they held at the peak following their 2nd largest cumulative loss of international reserves to that loss (see Table 7 and Figure 5 on pp. 134 & 135);

6. the percentage ratio of international reserves which they held at the peak following their 3rd largest cumulative loss of international reserves to that loss (see Table 8 and Figure 6 on pp. 138 & 139);

7. the percentage ratio of international reserves which they held on March 31, 1968 to their largest cumulative loss of international reserves (see Table 9 and Figure 7 on pp. 142 & 143);

8. the percentage ratio of international reserves which they held on March 31, 1968 to their 2nd largest cumulative loss of international reserves (see Table 10 and Figure 8 on pp. 146 & 147); and

9. the percentage ratio of international reserves which they held on March 31, 1968 to their 3rd largest cumulative loss of international reserves (see Table 11 and Figure 9 on pp. 150 & 151).

For these frequency distributions the country classifications used were: (1) Developed Market Economic Class I, (2) Other High Income Economic Class I, (3) Economic Class II Countries Less the Economic Class II Countries Which are Major Exporters of Oil, and (4) Economic Class II Countries Which are Major Exporters of Oil. This distinction was made among the Economic Class II Countries because the six Class II Countries which are major exporters of oil have increased their holdings of international reserves, especially in the 1960's, to such an extent their time series are very dissimilar to those of the other Class II Countries.

Each of the following frequency distributions is accompanied by a figure which presents the percentage frequency distributions in graphic form. The Economic Class II Countries Which are Major Exporters of Oil were not included in these figures for purposes of clarity and because these countries represent such a small percentage of the Class II Countries.

It should be noted that the number of countries in each classification is not constant throughout the nine frequency distributions. This is because (1) only two cumulative losses appeared in the time series of some countries and (2) in the time series of some countries one of the three largest cumulative losses terminated so near the end of the series that it was impossible to define the following peak.

TABLE 3

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK PRECEDING THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held at the Peak Preceding the Largest Cumulative Loss of Reserves to the Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%				
100% to 200%		3	25	1
200% to 300%	1	6	5	3
300% to 400%	1	1	1	
400% to 500%	2	2		1
500% to 600%	1	1	3	
600% to 700%	1	1		1
700% to 800%				
800% to 900%				
900% and over	3		2	
Total	9	14	36	6

TABLE 3--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
	21.4	69.4	16.7
11.1	42.9	13.9	50.0
11.1	7.1	2.8	
22.2	14.3		16.7
11.1	7.1	8.3	
11.1	7.1		16.7
33.3		5.5	
100.0	100.0	100.0	100.0

FIGURE 1

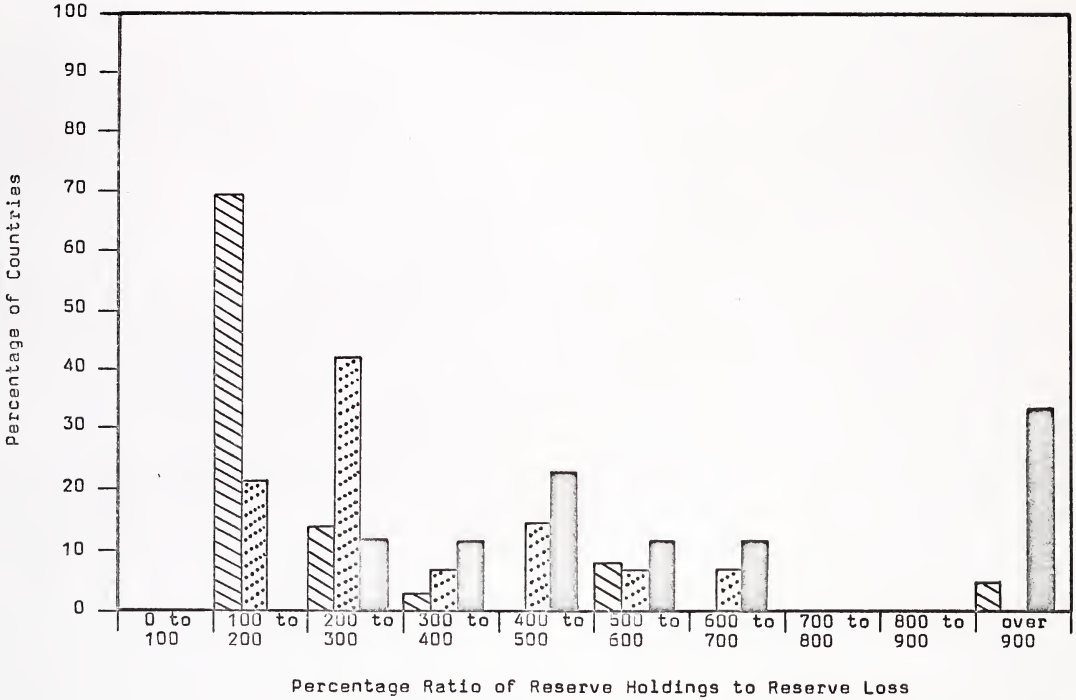
PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK PRECEDING THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES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10
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Percentage of Countries
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

TABLE 4

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK PRECEDING THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held at the Peak Preceding the 2nd Largest Cumulative Loss of Reserves to the 2nd Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%				
100% to 200%		2	10	
200% to 300%	1	4	14	2
300% to 400%		2	6	1
400% to 500%		1	2	1
500% to 600%			1	
600% to 700%	1	2		
700% to 800%	2			
800% to 900%		1		
900% and over	5	2	3	2
Total	9	14	36	6

TABLE 4--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
	14.3	27.8	
11.1	28.6	38.9	33.3
	14.3	16.7	16.7
	7.1	5.5	16.7
		2.8	
11.1	14.3		
22.2			
	7.1		
55.5	14.3	8.3	33.3
100.0	100.0	100.0	100.0

FIGURE 2

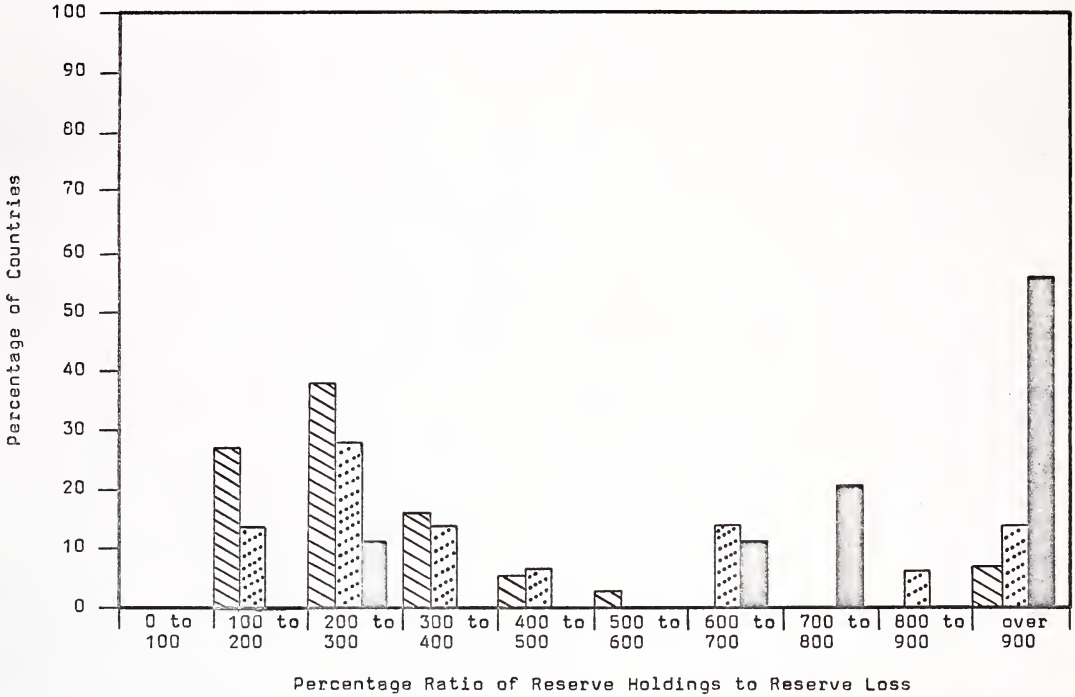
PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK PRECEDING THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES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Percentage of Countries
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

TABLE 5

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK PRECEDING THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held at the Peak Preceding the 3rd Largest Cumulative Loss of Reserves to the 3rd Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%				
100% to 200%		2	7	
200% to 300%			10	1
300% to 400%		2	8	
400% to 500%		2	2	
500% to 600%		1	2	2
600% to 700%	1		2	
700% to 800%		1	1	1
800% to 900%		1		
900% and over	8	5	3	2
Total	9	14	35	6

TABLE 5--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
	14.3	20.0	
		18.6	16.7
	14.3	22.9	
	14.3	5.7	
	7.1	5.7	33.3
11.1		5.7	
	7.1	2.9	16.7
	7.1		
88.9	35.7	8.6	33.3
100.0	100.0	100.0	100.0

FIGURE 3

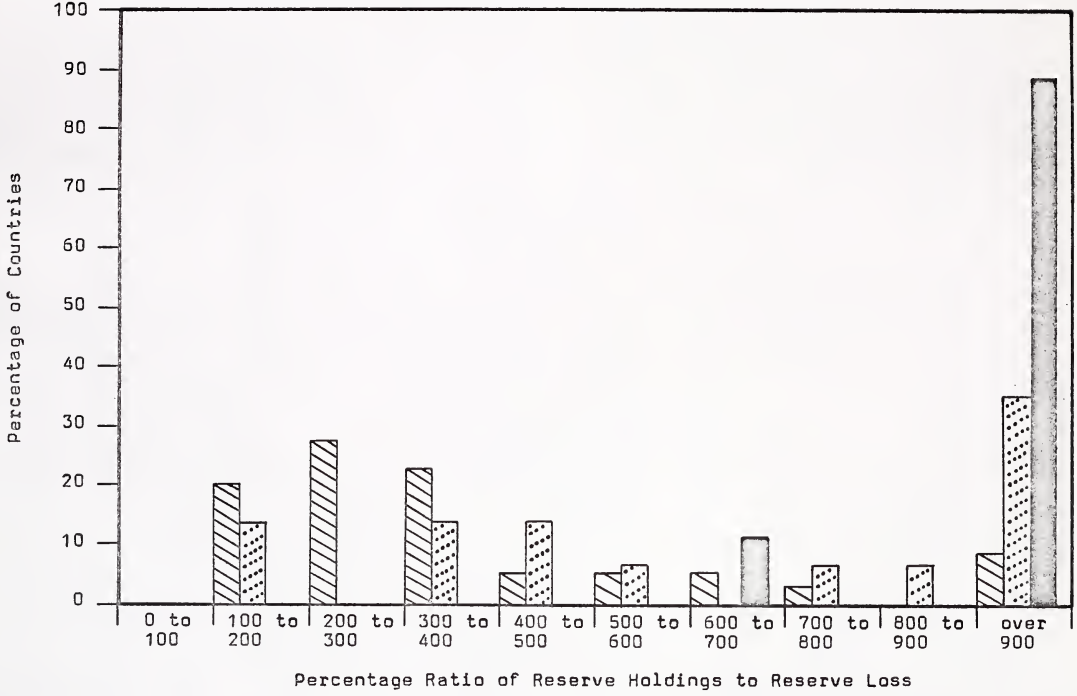
PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK PRECEDING THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES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20
10
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Percentage of Countries
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

TABLE 6

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK FOLLOWING THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held at the Peak Following the Largest Cumulative Loss of Reserves to the Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%			15	1
100% to 200%		4	8	
200% to 300%		3	4	1
300% to 400%	1	2		1
400% to 500%	2	1		
500% to 600%		1	1	
600% to 700%				
700% to 800%	1			
800% to 900%				
900% and over	2		1	
Total	6	11	29	3

TABLE 6--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
		51.7	33.3
	36.4	27.6	
	27.3	13.8	33.3
16.7	18.2		33.3
33.3	9.1		
	9.1	3.4	
16.7			
33.3		3.4	
100.0	100.0	100.0	100.0

FIGURE 4

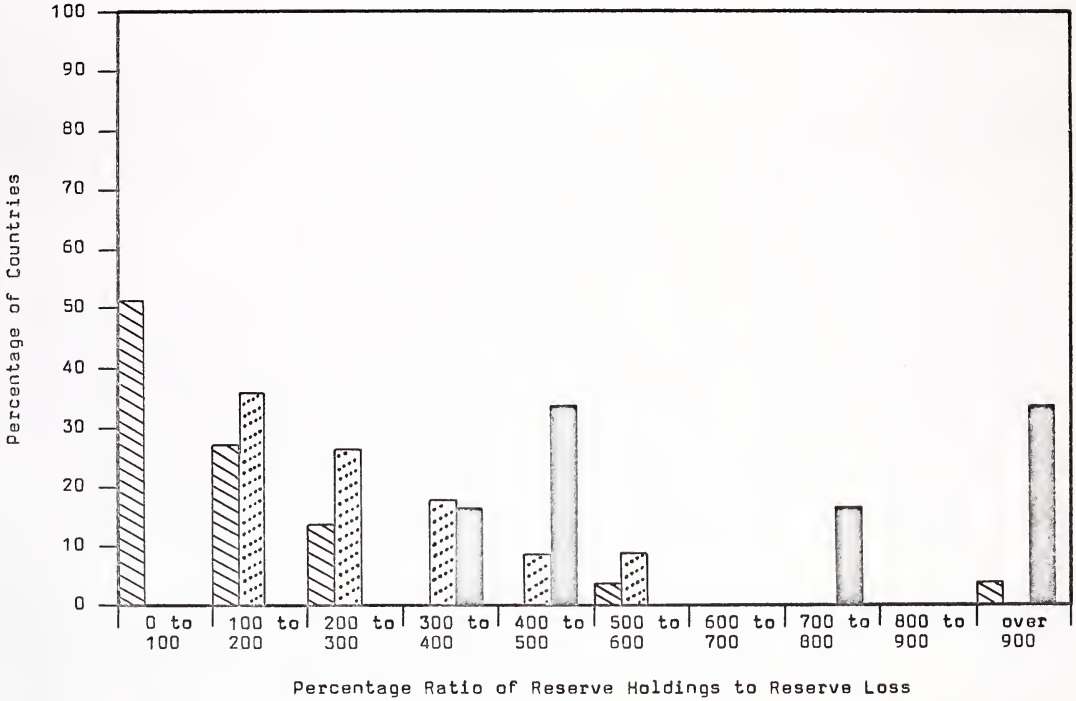
PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK FOLLOWING THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES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70
60
50
40
30
20
10
0
Percentage of Countries
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

TABLE 7

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK FOLLOWING THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held at the Peak Following the 2nd Largest Cumulative Loss of Reserves to the 2nd Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%			2	
100% to 200%		1	12	1
200% to 300%	1	2	6	1
300% to 400%		1	3	1
400% to 500%		2	2	
500% to 600%				
600% to 700%	2		1	
700% to 800%		1		1
800% to 900%		1		
900% and over	6	3	3	1
Total	9	11	29	5

TABLE 7--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
		6.9	
	9.1	41.4	20.0
11.1	18.2	20.7	20.0
	9.1	10.3	20.0
	18.2	6.9	
22.2		3.4	
	9.1		20.0
	9.1		
66.6	27.3	10.3	20.0
100.0	100.0	100.0	100.0

FIGURE 5

PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK FOLLOWING THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES

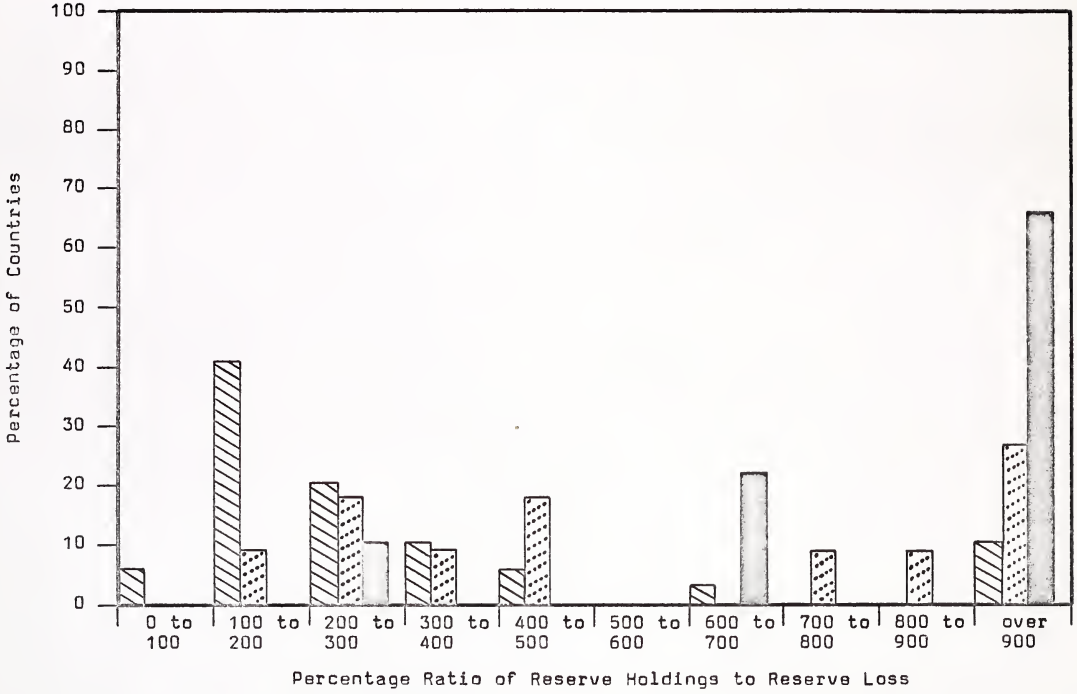

Percentage of Countries
100
90
80
70
60
50
40
30
20
10
0
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

TABLE 8

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK FOLLOWING THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held at the Peak Following the 3rd Largest Cumulative Loss of Reserves to the 3rd Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%		1	2	
100% to 200%		1	9	
200% to 300%			5	1
300% to 400%			5	1
400% to 500%				
500% to 600%		3	2	
600% to 700%	1		2	2
700% to 800%		1		
800% to 900%		1		
900% and over	5	3	4	2
Total	6	10	29	6

TABLE 8--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
	10.0	6.9	
	10.0	31.0	
		17.2	16.7
		17.2	16.7
	30.0	6.9	
16.7		6.9	33.3
	10.0		
	10.0		
83.3	30.0	13.8	33.3
100.0	100.0	100.0	100.0

FIGURE 6

PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES AT THE PEAK FOLLOWING THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES TO THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES

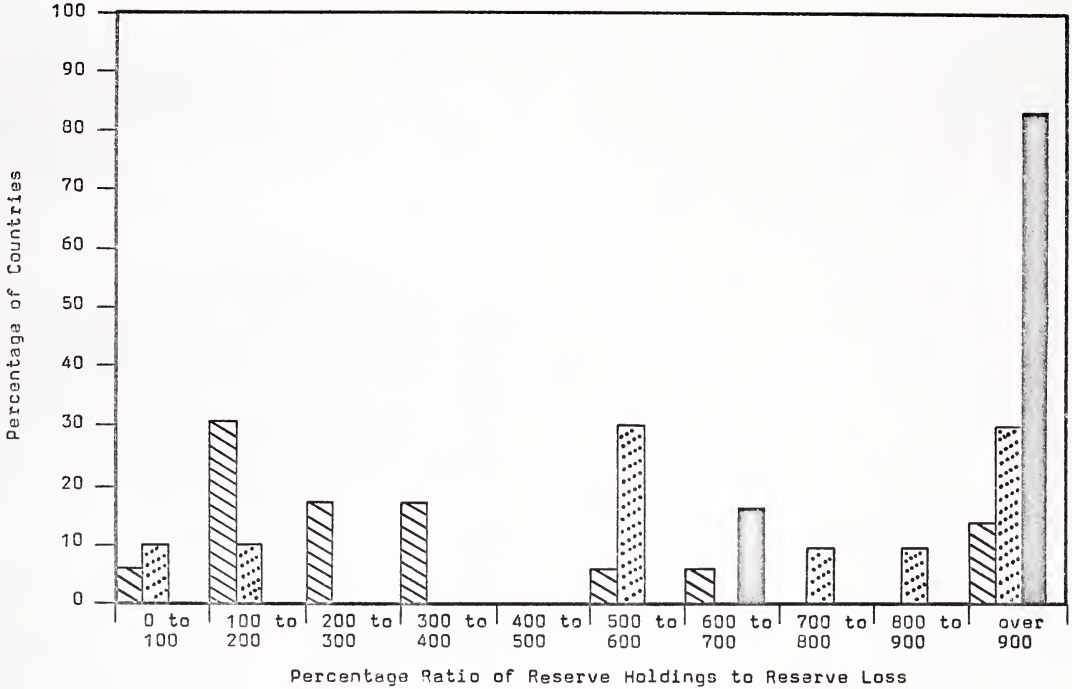

100
90
80
70
60
50
40
30
20
10
0
Percentage of Countries
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

TABLE 9

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES ON MARCH 31, 1968 TO THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held on March 31, 1968 to the Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%		1	17	1
100% to 200%		5	8	
200% to 300%		2	4	2
300% to 400%	1	2	2	1
400% to 500%	2	1	2	
500% to 600%	2			1
600% to 700%				1
700% to 800%				
800% to 900%				
900% and over	4	3	3	
Total	9	14	36	6

TABLE 9--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
	7.1	47.2	16.7
	37.5	22.2	
	14.3	11.1	33.3
11.1	14.3	5.5	16.7
22.2	7.1	5.5	
22.2			16.7
			16.7
44.4	21.4	8.3	
100.0	100.0	100.0	100.0

FIGURE 7

PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES ON MARCH 31, 1968 TO THEIR LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES

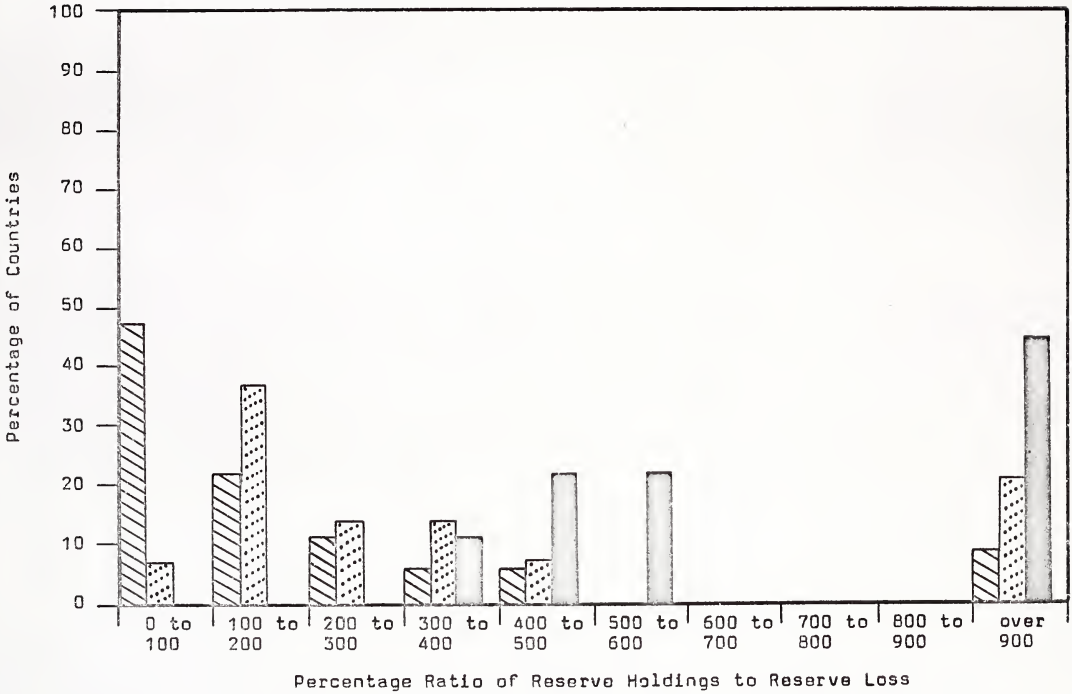

100
90
80
70
60
50
40
30
20
10
0
Percentage of Countries
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

TABLE 10

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES ON MARCH 31, 1968 TO THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held on March 31, 1968 to the 2nd Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%		1	7	
100% to 200%			9	
200% to 300%		5	11	
300% to 400%		1	2	2
400% to 500%	1	1		1
500% to 600%		1		
600% to 700%	1		1	
700% to 800%			1	
800% to 900%	1	1		
900% and over	6	4	5	3
Total	9	14	36	6

TABLE 10--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
	7.1	19.4	
		25.0	
	35.7	30.5	
	7.1	5.5	33.3
11.1	7.1		16.7
	7.1		
11.1		2.8	
		2.8	
11.1	7.1		
66.6	28.6	13.9	50.0
100.0	100.0	100.0	100.0

FIGURE 8

PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES ON MARCH 31, 1968 TO THEIR 2ND LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES

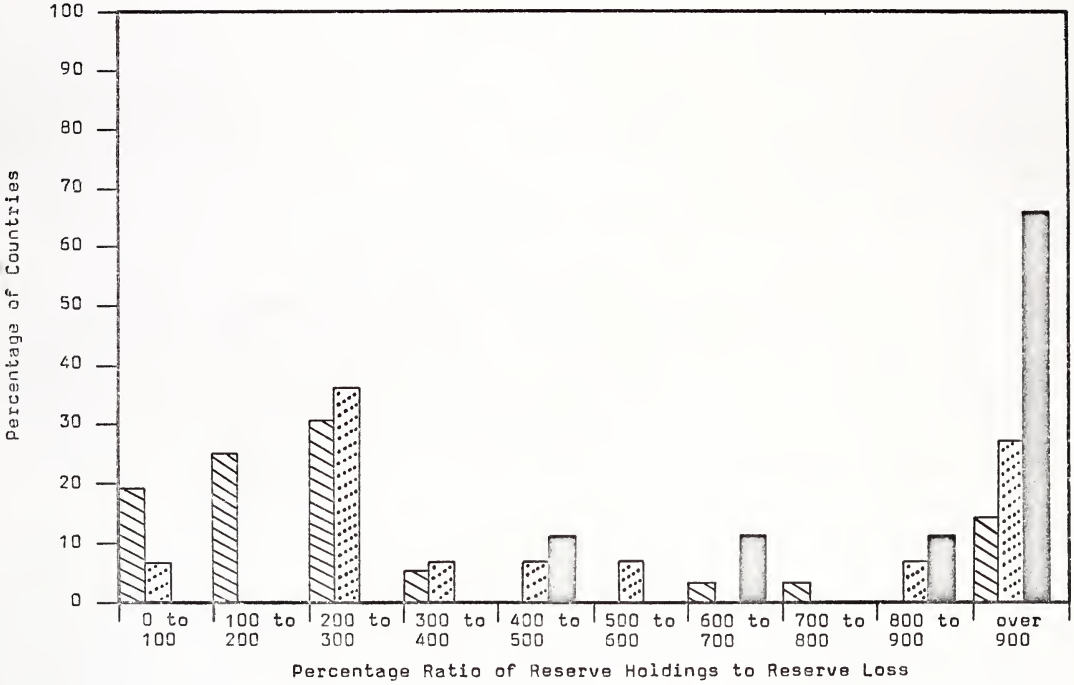

100
90
80
70
60
50
40
30
20
10
0
Percentage of Countries
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

TABLE 11

FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES ON MARCH 31, 1968 TO THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

Percentage Ratio of Reserves Held on March 31, 1968 to the 3rd Largest Cumulative Loss	Number of Countries			
	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
Under 100%		1	4	
100% to 200%			6	
200% to 300%		1	6	
300% to 400%		2	7	1
400% to 500%		3	3	
500% to 600%		1		1
600% to 700%			3	
700% to 800%				1
800% to 900%			1	
900% and over	9	6	5	3
Total	9	14	35	6

TABLE 11--Extended

Percentage of Countries			
Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less Major Oil Exporting Class II Countries	Economic Class II Countries Which are Major Exporters of Oil
	7.1	11.4	
		17.1	
	7.1	17.1	
	14.3	20.0	16.7
	21.4	8.6	
	7.1		16.7
		8.6	
			16.7
		2.8	
100.0	42.9	14.3	50.0
100.0	100.0	100.0	100.0

FIGURE 9

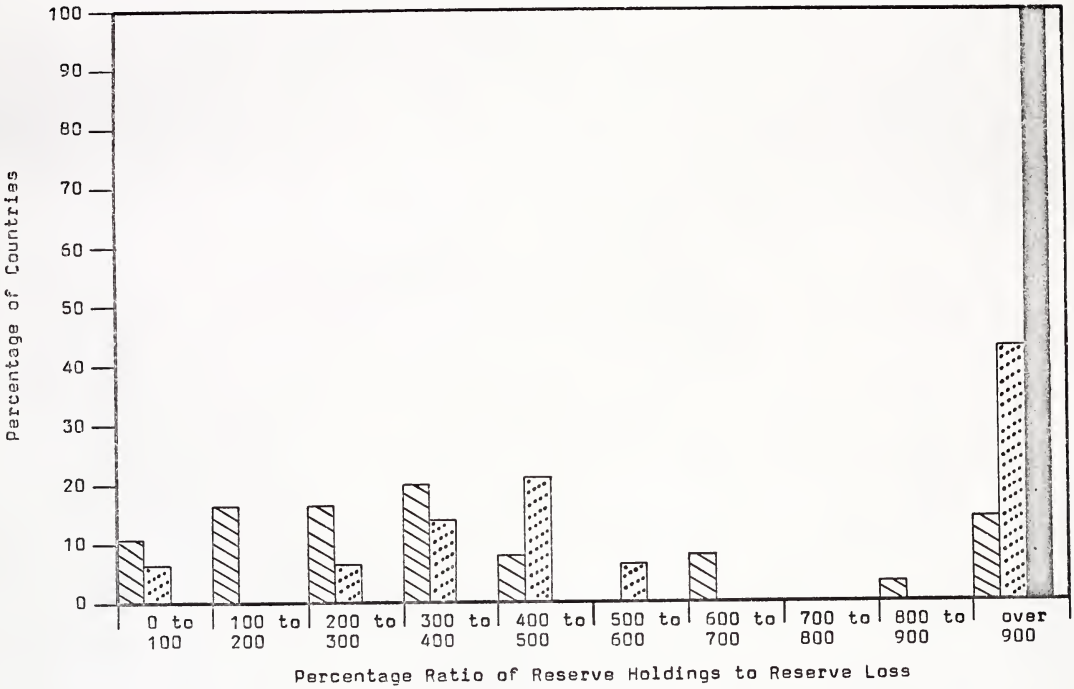
PERCENTAGE FREQUENCY DISTRIBUTION OF COUNTRIES ACCORDING TO THE RATIO OF THEIR HOLDINGS OF INTERNATIONAL RESERVES ON MARCH 31, 1968 TO THEIR 3RD LARGEST CUMULATIVE LOSS OF INTERNATIONAL RESERVES WHICH OCCURRED BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968

LEGEND:

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES

ECONOMIC CLASS II COUNTRIES


Percentage of Countries
100
90
80
70
60
50
40
30
20
10
0
0 to 100
100 to 200
200 to 300
300 to 400
400 to 500
500 to 600
600 to 700
700 to 800
800 to 900
over 900
Percentage Ratio of Reserve Holdings to Reserve Loss

Difficulties of quantitative generalization.--It is difficult to make quantitative generalizations about the results of these frequency distributions because of

1. the problem of assigning appropriate amounts of importance among the comparisons of reserve losses to (a) reserve holdings at the peaks preceding the losses, (b) reserve holdings at the peaks following the losses, and (c) current reserve holdings;

2. the problem of assigning the appropriate amounts of importance among the comparisons of reserve holdings to largest, 2nd largest, and 3rd largest losses;

3. the fact that the number of countries included in each classification varies greatly;

4. the fact that there is a great variation in the absolute holdings of reserves among the different categories of countries; and

5. the fact that the absolute amounts of international reserves held by the different countries included in the same classification vary greatly.

It is apparent from the frequency distributions that the different groups of countries exhibit different behavior patterns in their holdings of international reserves relative to their past losses. Yet it is difficult to quantitatively define the degree of difference which must exist in these patterns before they can be said to indicate that members of one group of countries would be likely to hold and use as international reserves any newly created reserve assets allocated to them while the members of another group of countries would be likely to use such

allocations only as a vehicle for transferring real resources to themselves on a permanent basis.

These difficulties do not, however, make a comparison of the behavior patterns which are exhibited in the frequency distributions useless. The purpose of pointing out the problems accompanying such a comparison is to make clear the impossibility of defining absolute quantitative criteria.

A comparison of the results.--Numerous comparisons of the data exhibited in the frequency distributions can, of course, be made in relation to criteria which, by necessity, must be somewhat arbitrary. One such comparison is presented below. This comparison presents the number of countries in each major classification which held reserves in amounts which were at least five times greater than their largest, 2nd largest, and 3rd largest losses at the three points of measurement. It also demonstrates the number of countries in each major classification which held reserves in amounts which were less than twice the size of their largest, 2nd largest, and 3rd largest losses at the three points of measurement.

The greater than five and the less than two ratios of reserve holdings to losses may not be the most appropriate choices. Nevertheless, it seems that countries falling within the former category would have exhibited patterns of behavior toward their holdings of international reserves which are quite different from those exhibited by

the countries falling in the latter category. For example, using a $1 million reserve loss as a basis of comparison, the countries falling in the less than two ratio of reserve holdings to losses category would have held from 0 to $2 million in reserves at the point of measurement.[25] On the other hand, countries in the greater than five ratio of reserve holdings to losses category would have held at least $5 million in reserves at the point of measurement. This is, of course, a biased comparison since countries could never hold less than zero reserves but could hold reserves in amounts much greater than five times their previous losses.[26]

At the peaks preceding their 1st, 2nd, and 3rd largest cumulative losses of international reserves the following number of countries held international reserves in amounts which were five or more times larger than the losses which followed:

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[25] Of course when the amount of reserves held at a peak is compared to a following loss the resulting ratio must be one or greater since a country could not lose reserves which it did not hold.

[26] In fact in the 77 measurements made of the Developed Market Economic Class I Countries there were 32 instances in which these countries held reserves in amounts which were more than twelve times the size of their past losses.

	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less the Major Oil Exporters
Largest loss	5 of 9	2 of 14	5 of 36
2nd largest loss	8 of 9	5 of 14	4 of 36
3rd largest loss	9 of 9	8 of 14	8 of 35

At the peaks preceding their 1st, 2nd, and 3rd largest cumulative losses of international reserves the following number of countries held international reserves in amounts which were no more than twice as large as the losses which followed:

	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less the Major Oil Exporters
Largest loss	0 of 9	3 of 14	25 of 36
2nd largest loss	0 of 9	2 of 14	10 of 36
3rd largest loss	0 of 9	2 of 14	7 of 36

At the peaks following their 1st, 2nd, and 3rd largest cumulative losses the following number of countries had accumulated international reserves in amounts which were five or more times greater than the losses which preceded the peaks:

	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less the Major Oil Exporters
Largest loss	3 of 6	1 of 11	2 of 29
2nd largest loss	8 of 9	5 of 11	4 of 29
3rd largest loss	6 of 6	8 of 10	8 of 29

At the peaks following their 1st, 2nd, and 3rd largest cumulative losses the following number of countries had failed to accumulate international reserves in amounts which were at least twice as great as the preceding losses:

	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less the Major Oil Exporters
Largest loss	0 of 6	4 of 11	23 of 29
2nd largest loss	0 of 9	1 of 11	14 of 29
3rd largest loss	0 of 6	2 of 10	11 of 29

As of March 31, 1968 the following number of countries held international reserves in amounts which were at least five times as great as their largest, 2nd largest, and 3rd largest losses:

	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less the Major Oil Exporters
Largest loss	6 of 9	3 of 14	2 of 36
2nd largest loss	8 of 9	6 of 14	7 of 36
3rd largest loss	9 of 9	7 of 14	9 of 35

As of March 31, 1968 the following number of countries had failed to accumulate international reserves in amounts which were at least twice as great as their largest, 2nd largest, and 3rd largest losses:

	Developed Market Economic Class I Countries	Other High Income Economic Class I Countries	Economic Class II Countries Less the Major Oil Exporters
Largest loss	0 of 9	6 of 14	25 of 36
2nd largest loss	0 of 9	1 of 14	16 of 36
3rd largest loss	0 of 9	1 of 14	10 of 35

While it is impossible to adequately summarize these comparisons in terms of a small number of numerical relationships, three significant observations may be made: (1) the large number of Developed Market Economic Class I Countries which at all points of measurement held reserves in amounts which were at least five times as large as their previous losses; (2) the large number of non-oil exporting Economic Class II Countries which at all points of measurement held reserves in amounts which were less than

twice the size of their previous losses; and (3) that, in spite of the general upward trend in world reserves, the Non-Oil Exporting Countries are currently not holding international reserves in amounts which are appreciably greater than the reserves they held at the peaks preceding and following the three largest cumulative losses of reserves which they incurred over the 1952-1968 period.

Summary observations derived from the results of the analysis.--The difficulties involved with making quantitative generalizations about the results of the frequency distributions and of the comparisons which followed have already been pointed out. The results of the analysis do, however, seem to justify the following qualitative observations:

I. In general, the Non-Oil Exporting Economic Class II Countries:

   A. held stocks of international reserves which, relative to their major losses of reserves occurring over the 1958-1968 period, were much smaller than the stocks of international reserves held by the Developed Market Economic Class I Countries relative to their major losses occurring over the same period;

   B. reconstituted their holdings of international reserves relative to their major reserve losses to a much smaller extent than did the Developed Market Economic Class I Countries;

   C. currently hold stocks of international reserves which, relative to their major losses of reserves occurring in the 1952-1968 period, are much smaller than the stocks of international reserves currently held by the Developed Market

Economic Class I Countries relative to their major losses occurring over the same period.[27]

II. The behavior patterns exhibited by the Other High Income Economic Class I Countries toward their holdings of international reserves lie between the patterns exhibited by the Developed Market Economic Class I Countries and the Non-Oil Exporting Economic Class II Countries.

A Supplementary Analysis Based on I.M.F. Drawings

Introduction

The lack of quantitative generalizations describing the results of the previous analysis bars firm conclusions. It therefore seems appropriate to supply a supplementary analysis, and the remainder of this chapter is devoted to that purpose. The analysis is based on an examination of the use made of I.M.F. drawing rights by member countries between 1952 and 1968. Of course the I.M.F. drawing rights and the S.D.R.'s are not identical. Nevertheless, some features of the I.M.F. drawing rights and the S.D.R.'s are closely parallel. The degree of parallelism seems large enough to justify examining the past behavior of individual countries toward their I.M.F. drawing rights and using the results of this examination as an indication of what the same countries would be likely to do with any allocations of S.D.R.'s.

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[27]An analysis of reserve behavior patterns exhibited by Non-Oil Exporting Economic Class II Countries according to geographical location (i.e., Africa, Asia, Latin America, and the Middle East) was also carried out. No large differences were noted in the patterns of reserve behavior among the different geographical groupings of these underdeveloped countries. However, the analysis did reveal that Israel, Jordan, Lebanon, and Thailand had each tripled their

The nature of drawing rights with the I.M.F.

The proposed S.D.R.'s would be similar to the present drawing rights with the I.M.F. in that they would also constitute an asset created by international agreement which could be used to finance balance-of-payments deficits. However, while all of the S.D.R.'s are to be considered as international reserves, only a portion of the present I.M.F. drawing rights are now considered as international reserves. Only the "gold" or "super gold tranche" portion of a country's total drawing rights with the Fund is available to the member on a virtually automatic basis. Therefore, only this portion of a country's total I.M.F. drawing rights is customarily considered as a part of its "owned" international reserves.[28] The remaining portion of the drawing rights represent potential credit which will be granted only if the Fund receives "substantial justification" and even then the Fund attaches certain conditions to the grant.[29] Furthermore, individual countries initially establish their gold tranche positions by depositing an equal value of gold with the Fund and,

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reserve holdings since 1952 and suffered only small losses of reserves in the 1952-1968 period.

[28]Fritz Machlup, From Dormant Liabilities to Dormant Assets ("Reprints in International Finance," No. 8; Princeton: Princeton University Press, October, 1967), pp. 788-90; Fritz Machlup, Credit Facilities or Reserve Allotments ("Reprints in International Finance," No. 7; Princeton: Princeton University Press, September, 1967); and International Monetary Fund, 1966 Annual Report . . . , pp. 14-16.

[29]Fleming, The International Monetary Fund . . . , pp. 33-34.

consequently, realize no net increase in their international reserves.[30]

Of course, "owned" international reserves such as those which would be distributed under the S.D.R. plan could be used in any manner and for whatever purpose the owner desired. In this way they differ from I.M.F. drawing rights including those of the gold tranche since all drawings from the I.M.F. are supposed to provide temporary assistance to members in financing balance-of-payments deficits. This assistance is to be provided in connection with seasonal, cyclical, and emergency fluctuations in a member's balance of payments.[31] Furthermore, the Executive Board of the I.M.F. ruled in 1952 that

> . . . exchange purchased from the Fund should not remain outstanding beyond the period reasonably related to the payments problem for which it was purchased from the Fund. This period should fall within an outside range of three to five years.[32]

The very fact that the I.M.F. presently imposes use and time restrictions on drawings and frequently requires drawing countries to undertake domestic programs of financial stabilization, should mean that, ceteris paribus, countries

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[30] Machlup, The Cloakroom Rule. . . .

[31] International Monetary Fund, Selected Decisions of the Executive Directors, Decision No. 71-2, p. 53. Also see Fleming, The International Monetary Fund . . . , p. 30.

[32] International Monetary Fund, 1952 Annual Report of the International Monetary Fund (Washington: International Monetary Fund, 1952), p. 88. Also see International Monetary Fund, "Executive Board Decision No. 102-(52/11), February 13, 1952," Selected Decisions of the Executive Directors (2d ed.; Washington: International Monetary Fund, September, 1963), p. 21.

would tend to use their present I.M.F. drawing rights less frequently and reconstitute their drawings at a faster rate than they would direct allocations of S.D.R.'s. It, therefore, seems that the manner in which countries have previously made use of the present I.M.F. drawing facilities should provide a basis for making a very conservative estimate of their most likely future behavior toward S.D.R.'s received by direct allocation.

It is, of course, recognized that the I.M.F. can perform one of its primary functions only if member countries are willing to make use of their drawing rights. It would be erroneous to imply that a country or group of countries has fallen short of correct financial practice because it has made extensive use of the I.M.F.'s drawing facilities. However, the following examination of the use previously made of the I.M.F.'s drawing facilities does reveal behavior patterns for the underdeveloped countries which differ from those of the developed countries.

Continuous drawings

According to the statements of policy made by the International Monetary Fund, member countries are supposed to use their drawings from the Fund to meet temporary balance-of-payments deficits[33] and to repay these drawings

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[33]International Monetary Fund, Selected Decisions of the Executive Directors, Decision No. 71-2, p. 53. Also see Fleming, The International Monetary Fund . . . , p. 30.

within ". . . an outside range of three to five years."[34] It appears, however, that a large number of Economic Class II Countries have failed to adhere to this policy.

Thirty or 71.4% of the Economic Class II Countries which belong to the I.M.F. have had drawings outstanding with the I.M.F. for 13 or more consecutive quarters over the 1952-1968 period. Nineteen of these thirty countries have had drawings outstanding for 21 or more consecutive quarters over this period.

Three or 30.0% of the Developed Market Economic Class I Countries which belong to the I.M.F. had drawings outstanding for 13 or more consecutive quarters, and none had drawings continuously outstanding for more than five years. Five or 35.7% of the Other High Income Economic Class I Countries which are I.M.F. members had drawings outstanding for 13 or more consecutive quarters, and two of these five countries had drawings continuously outstanding for more than 21 consecutive quarters over the 1952-1968 period.

Tables 12, 13, and 14 illustrate this behavior in more detailed form. The individual countries in each major classification are listed according to the largest number of consecutive quarters in which they had drawings outstanding. The number of consecutive quarters in which each country had drawings outstanding as of March 31, 1968 is also indicated.

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[34] International Monetary Fund, 1952 Annual Report . . . , p. 88. Also see International Monetary Fund, Selected Decisions of the Executive Directors, Decision No. 102-(52/11), p. 21.

The behavior patterns illustrated in Tables 12, 13, and 14 would seem to lead to the preliminary conclusion that a large number of the Economic Class II Countries have used their drawing rights with the I.M.F. as a costless means of transferring real resources from other countries to themselves on an extended, if not permanent, basis. However, one qualification is necessary. If these countries used only the gold tranche portion of their drawing rights, they merely gained the real resources of other countries in exchange for quantities of gold which they previously held. Such behavior would still seem to be in direct conflict with the general policies of the I.M.F. toward the use of drawing rights (i.e., drawings from the Fund should be used only to finance temporary balance-of-payments deficits and should be repaid within three to five years). However, it would not have resulted in the Economic Class II Countries gaining any real resources from other countries which they could not have obtained by selling the gold which they deposited with the I.M.F. to establish their gold tranches.

The continuous use of their drawing rights with the I.M.F. by the Economic Class II Countries, regardless of the tranches used, does establish a behavior pattern. The pattern established would seem to provide a basis for predicting that a large number of the Economic Class II Countries would use any direct allocations of S.D.R.'s to

import real resources from other countries and would not be likely to reconstitute the S.D.R.'s used for this purpose.

TABLE 12

DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES WHICH HAVE HAD DRAWINGS OUTSTANDING WITH THE I.M.F. FOR 13 OR MORE CONSECUTIVE QUARTERS BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968[a]

Country	Largest Number of Consecutive Quarters in Which Drawings Have Been Outstanding Between the 1st Quarter of 1952 and the 1st Quarter of 1968	Number of Consecutive Quarters in Which Drawings Have Been Outstanding as of March 31, 1968
France	17	0
United Kingdom	16	14
United States	13	13

Source: International Monetary Fund, International Financial Statistics (1952-1968) and International Monetary Fund, International Financial Statistics. Supplement to 1966/1967 Issues (1967).

[a]Table is based on end of quarter observations.

TABLE 13

OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES WHICH HAVE HAD DRAWINGS OUTSTANDING WITH THE I.M.F. FOR 13 OR MORE CONSECUTIVE QUARTERS BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968[a]

Country	Largest Number of Consecutive Quarters in Which Drawings Have Been Outstanding Between the 1st Quarter of 1952 and the 1st Quarter of 1968	Number of Consecutive Quarters in Which Drawings Have Been Outstanding as of March 31, 1968
Turkey	63	63
Yugoslavia	41	41
Australia	13	0
Denmark	12	0
Iceland	12	2

Source: International Monetary Fund, International Financial Statistics (1952-1968) and International Monetary Fund, International Financial Statistics, Supplement to 1966/1967 Issues (1967).

[a]Table is based on end of quarter observations.

TABLE 14

UNDERDEVELOPED ECONOMIC CLASS II COUNTRIES WHICH HAVE HAD DRAWINGS OUTSTANDING WITH THE I.M.F. FOR 13 OR MORE CONSECUTIVE QUARTERS BETWEEN THE 1ST QUARTER OF 1952 AND THE 1ST QUARTER OF 1968[a]

Country	Largest Number of Consecutive Quarters in Which Drawings Have Been Outstanding Between the 1st Quarter of 1952 and the 1st Quarter of 1968	Number of Consecutive Quarters in Which Drawings Have Been Outstanding as of March 31, 1968
Brazil[b]	65	65
Chile	59	59
Paraguay	54	0
Bolivia	53	1
India	45	45
United Arab Republic	45	45
Argentina[c]	44	44
Iran	43	1
Philippines	42	2
Haiti[c]	42	42
Honduras	32	32
Colombia	29	29
Syria	29	29
Ecuador	28	28
Ceylon	28	28

Costa Rica	26	26
Ghana[c]	23	23
Uruguay[c]	22	22
Sudan[c]	21	21
Afganistan[c]	20	20
Burma[c]	20	2
Dominican Republic	17	15
Morocco[c]	16	16
Somalia[c]	16	16
Mali[c]	15	15
Cyprus[c]	14	14
Nicaragua	14	0
Tunisia[c]	14	14
Pakistan	13	13
Panama	13	13

Source: International Monetary Fund, International Financial Statistics (1952-1968) and International Monetary Fund, International Financial Statistics. Supplement to 1966/1967 Issues (1967).

[a]Table is based on end of quarter observations.

[b]Brazil has had drawings outstanding since April, 1949, or for 76 consecutive quarters.

[c]These countries had not established drawing rights with the I.M.F. as of the 1st quarter of 1952. Their drawing rights were established in the years indicated: 1953--Burma, Haiti; 1956--Argentina; 1957--Ghana, Sudan, Uruguay; 1958--Morocco; 1961--Cyprus; 1963--Afganistan, Somalia; 1964--Mali, Tunicia.

Percentages of tranches used

In view of the discussion in the previous section, it seems worthwhile to establish the percentage of each I.M.F. tranche used by countries in the different major classifications.

Tables 15, 16, 17, and 18 illustrate the percentages of each tranche used by

1. the Developed Market Economic Class I Countries including the United Kingdom and the United States (see Table 15, p. 171);

2. the Developed Market Economic Class I Countries excluding the United Kingdom and the United States (see Table 16, p. 172);

3. the Other High Income Economic Class I Countries (see Table 17, p. 173); and

4. the Economic Class II Countries (see Table 18, p. 174).

It is apparent from those tables that the Economic Class II Countries have used their drawing rights with the I.M.F. to a much greater extent than have the Developed Market Economic Class I Countries. More specifically, the extensive use which the Economic Class II Countries have made of their 1st and higher credit tranches can be noted. This fact combined with the previous demonstration of the large number of Economic Class II Countries which have had drawings continuously outstanding with the I.M.F. would seem to indicate that some of these countries have been using their drawing rights as an almost costless means of obtaining real resources from other countries.

TABLE 15

PERCENTAGE OF GOLD AND CREDIT TRANCHES DRAWN BY DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES, INCLUDING THE UNITED KINGDOM AND THE UNITED STATES, 1952-1968[a]

Year	Tranche					
	Gold	1st Credit	2nd Credit	3rd Credit	4th Credit	5th Credit
1952	28.1					
1953	19.0					
1954	10.7					
1955	2.9					
1956	20.8	15.2				
1957	40.9	27.6				
1958	29.3	22.6	8.4			
1959	20.5					
1960						
1961	19.8	19.8	2.5			
1962	5.6	5.6				
1963	5.6	2.4				
1964	28.5	19.3	1.0			
1965	34.5	19.3	19.3	19.3	16.6	
1966	46.5	18.7	18.7	17.8		
1967	42.9	18.7	8.9			
1968	46.3	18.7	8.8			

Source: International Monetary Fund, International Financial Statistics (1952-1968) and International Monetary Fund, International Financial Statistics, Supplement to 1966/1967 Issues (1967).

[a]Based on end of year observations except for the 1968 observation which is based on drawings outstanding and quotas existing on March 31, 1968.

TABLE 16

PERCENTAGE OF GOLD AND CREDIT TRANCHES DRAWN BY DEVELOPED MARKET ECONOMIC CLASS I COUNTRIES, EXCLUDING THE UNITED KINGDOM AND THE UNITED STATES, 1952-1968[a]

Year	Tranche					
	Gold	1st Credit	2nd Credit	3rd Credit	4th Credit	5th Credit
1952	31.7					
1953	34.3					
1954	30.6					
1955	8.2					
1956						
1957	57.2	35.5				
1958	24.0	24.0	24.0			
1959	19.1					
1960						
1961						
1962	14.5	14.5				
1963	14.5	6.2				
1964						
1965						
1966						
1967						
1968						

Source: International Monetary Fund, International Financial Statistics (1952-1968) and International Monetary Fund, International Financial Statistics, Supplement to 1966/1967 Issues (1967).

[a]Based on end of year observations except for the 1968 observation which is based on drawings outstanding and quotas existing on March 31, 1968.

TABLE 17

PERCENTAGE OF GOLD AND CREDIT TRANCHES DRAWN BY OTHER HIGH INCOME ECONOMIC CLASS I COUNTRIES, 1952-1968[a]

Year	Tranche					
	Gold	1st Credit	2nd Credit	3rd Credit	4th Credit	5th Credit
1952	51.5					
1953	46.4	6.6	5.2			
1954	28.9	6.6	1.5			
1955	12.1	2.6				
1956	12.1	2.6				
1957	17.1	17.1				
1958	30.4	15.3	5.5	3.2		
1959	21.5	15.5				
1960	28.1	7.6	.4			
1961	48.9	32.9	7.9	.1		
1962	13.8	13.1	7.2			
1963	13.1	13.1	10.0	3.8		
1964	13.1	13.1	7.0			
1965	21.1	20.3	7.6	5.1		
1966	21.2	15.9	5.8			
1967	37.4	23.0	19.2	12.1	.4	
1968	35.8	22.5	19.2	6.0		

Source: International Monetary Fund, International Financial Statistics (1952-1968) and International Monetary Fund, International Financial Statistics, Supplement to 1966/1967 Issues (1967).

[a]Based on end of year observations except for the 1968 observation which is based on drawings outstanding and quotas existing on March 31, 1968.

TABLE 18

PERCENTAGE OF GOLD AND CREDIT TRANCHES DRAWN BY ECONOMIC CLASS II COUNTRIES, 1952-1968[a]

Year	Tranche					
	Gold	1st Credit	2nd Credit	3rd Credit	4th Credit	5th Credit
1952	53.4					
1953	56.7	10.0				
1954	52.4	14.5				
1955	30.7	18.7	.9			
1956	30.6	10.1	5.2	2.5	.2	
1957	72.2	71.9	7.5	2.3		
1958	70.5	69.2	19.0	3.1		
1959	65.7	40.2	5.8			
1960	58.9	31.0	13.1	1.0	.1	
1961	72.5	51.9	24.9	5.3		
1962	65.1	57.2	24.8	5.3	2.8	
1963	62.4	53.6	26.0	14.5	8.7	1.9
1964	67.6	45.5	20.7	12.4	8.1	.1
1965	69.1	58.9	21.7	10.3	3.9	
1966	64.7	47.4	21.4	4.2	1.1	
1967	67.2	42.0	31.3	10.4	.9	
1968	65.6	44.5	25.8	9.1	2.6	.1

Source: International Monetary Fund, International Financial Statistics (1952-1968) and International Monetary Fund, International Financial Statistics, Supplement to 1966/1967 Issues (1967).

[a]Based on end of year observations except for the 1968 observation which is based on drawings outstanding and quotas existing on March 31, 1968.

Immediate use of incremental gold tranche positions resulting from general quota increases

In 1959 and again in 1966 the I.M.F. quotas of most member countries were increased. The quota increases became effective for individual countries upon their payment into the Fund of an amount of gold equal in dollar value to 25 percent of the increase in their quota. Each participating country, therefore, increased its gold tranche position by one-fourth of the increase in its quota.

The increased gold tranche positions represented additional drawing rights to which the participating countries had virtually automatic and unconditional access. In this respect they were similar to the proposed S.D.R.'s. The increased gold tranche positions were supposed to be used only for purposes of meeting temporary balance-of-payments deficits and were not intended as a source of long-term aid. The proposed S.D.R.'s are also intended to provide liquidity and not long-term aid. While the increased gold tranche positions were not costless to the member countries as the S.D.R.'s would be, this does not distinguish them from the S.D.R.'s as to their intended function. In view of these similarities, a comparison was made of how rapidly the increased gold tranche positions were drawn down by individual countries in the different major categories. It would seem that the results of this comparison would provide an indication of how rapidly recipient countries are likely to draw down allocations

TABLE 19

THE NUMBER OF COUNTRIES WHICH USED THEIR INCREMENTAL GOLD TRANCHE POSITIONS RESULTING FROM THE 1959 GENERAL QUOTA INCREASES WITHIN ONE QUARTER AND WITHIN ONE YEAR

Classification	Number of Countries Receiving an Increased Quota	Number of Countries Increasing Drawings by at Least 25% of the Addition to Their Quota Within One Quarter of When the Addition Became Effective	Number of Countries Increasing Drawings by at Least 25% of the Addition to Their Quota Within One Year of When the Addition Became Effective
Developed Market Economic Class I Countries	10	0	1
Other High Income Economic Class I Countries	11	1	1
Underdeveloped Economic Class II Countries	32	11	12

Source: International Monetary Fund, 1958 Annual Report of the International Monetary Fund (Washington: International Monetary Fund, 1958), pp. 161-63; idem, 1959 Annual Report of the International Monetary Fund (Washington: International Monetary Fund, 1959), pp. 13-18, 169-72; idem, 1960 Annual Report of the International Monetary Fund (Washington: International Monetary Fund, 1960), pp. 13-14, 163-66; idem, 1963 International Financial Statistics (1958-1961); and idem, International Financial Statistics, supplement to 1966/1967 issues (1967).

TABLE 20

THE NUMBER OF COUNTRIES WHICH USED THEIR INCREMENTAL GOLD TRANCHE POSITIONS RESULTING FROM THE 1966 GENERAL QUOTA INCREASES WITHIN ONE QUARTER AND WITHIN ONE YEAR

Classification	Number of Countries Receiving an Increased Quota	Number of Countries Increasing Drawings by at Least 25% of the Addition to Their Quota Within One Quarter of When the Addition Became Effective	Number of Countries Increasing Drawings by at Least 25% of the Addition to Their Quota Within One Year of When the Addition Became Effective
Developed Market Economic Class I Countries	5	0	1
Other High Income Economic Class I Countries	12	3	6
Underdeveloped Economic Class II Countries	41	19	24

Source: International Monetary Fund, 1966 Annual Report . . . , pp. 123-25 and International Monetary Fund, International Financial Statistics (1965-1968).

of S.D.R.'s. This comparison is detailed in Tables 19 and 20.

From the relationships expressed in Tables 19 and 20 the existence of two strikingly different behavior patterns can be found. These differences are evident in the following summary observations:

1. Over 34 percent of the Economic Class II Countries used all of their incremental gold tranche positions established in 1959 within one quarter of the date when they became effective.

2. Over 46 percent of the Economic Class II Countries used all of their incremental gold tranche positions established in 1966 within one quarter of the date when they became effective.

3. None of the Developed Market Economic Class I Countries[35] used all of their gold tranche positions established in 1959 or in 1966 within one quarter of the date when they became effective.

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[35]Including the United Kingdom and the United States.

SUMMARY AND CONCLUSIONS

Most--though not all--countries now hold only a fraction of their international reserves in the form of gold. These countries are willing to hold a portion of their reserves in the form of short-term claims on the currencies of other countries. This holding of foreign exchange balances as international reserves "economizes" gold in the sense that it allows the total volume of international reserves to exceed the monetary value of the world's gold stock.

The problem with this arrangement is that it imparts an instability to the international monetary system. This instability results from the fact that key currency countries can make net additions to the world's supply of international reserves only if they allow their short-term liabilities to foreigners to grow at a faster rate than their own holdings of gold reserves. However, as the volume of foreign-held short-term liabilities increases and the net reserve position of a key currency country deteriorates, claims on the key currency tend to become less acceptable as a form in which to hold international reserves. Such a decline in acceptability is generally the result of expectations that the unit value of a particular key

currency will decline relative to other currencies or gold. These expectations can prompt sudden and large-scale shifts from key currency to key currency or to gold which can disrupt the international monetary system and international transactions in general. Even the possibility that such shifts may occur often results in key currency countries imposing restrictive policy measures on their domestic economies and/or restrictions on their international trade and exchange transactions which would otherwise be unnecessary.

One has only to make a brief review of monetary history from the beginning of this century to realize that the problems associated with the international gold-exchange standard have existed in reality as well as in academic reasoning. These problems notwithstanding, most experts foresee a need for future increases in the level of international reserves, and there seems to be general agreement that future additions to the world's physical gold stock will not be large enough to meet this need. As a result of these forecasts and the problems associated with the present international monetary system, numerous proposals have been made to modify or replace the existing system. One of these proposals, that of creating a new fiduciary form of international reserves through the International Monetary Fund, is now being seriously considered for adoption by members of the I.M.F.

If these new reserves, called S.D.R.'s, are created, they must be allocated among different countries before they can function as international reserves. On the one hand it is argued that all countries should be direct recipients of the S.D.R.'s. On the other hand it is argued that the S.D.R.'s should be directly allocated to only the developed countries.

Those who take the first position point out that it would be arbitrary to deny underdeveloped countries direct allocations of S.D.R.'s because of the difficulties involved in categorizing countries. It is further pointed out that to exclude the underdeveloped countries

> . . . would risk creating a sense of discrimination which would hamper monetary co-operation and understanding and which might well lead to demand for compensation in other ways.[1]

It can also be argued that the underdeveloped countries are relatively more dependent on world trade than the developed countries but, because their economies are less diversified, they are less capable of adapting to trade fluctuations. Consequently, the underdeveloped countries

> . . . are in urgent need of reserves to meet temporary shortfalls in export earnings. For their current level of reserves do not permit much margin for adjustment consistent with preserving planned growth rates, in the event of unforeseen fluctuations in exports.[2]

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[1] Report of the Study Group on the Creation of Reserve Assets, pp. 59-60.

[2] United Nations (TD/B/34) (1966), p. 35.

The other view, that only developed countries should be direct recipients of the S.D.R.'s, recognizes the logic of some of the points made in the preceding paragraph. It holds, however, that the advantages of the limited membership outweigh its disadvantages. It is argued that the S.D.R.'s must be based on credit, and the credit of those who back the S.D.R.'s must be unquestioned. "There must be no room for doubt whether the asset will, in practice, be honoured in operation or, ultimately, in liquidation."[3] It is pointed out that the S.D.R.'s which will be distributed to recipients will command real resources, but the initial recipients will not have to forego real resources in order to earn the S.D.R.'s.

> Care is therefore needed in establishing the group in which they are to be used. A reserve asset is characterised by the expectation that, if it flows out, it should ordinarily be reconstituted in time.[4]

Therefore the S.D.R.'s

> . . . should be distributed only to countries whose balance of payments is likely to move between deficit and surplus and which are, therefore, able to assume the obligations as well as the rights entailed in the convention and its working.[5]

This paper takes the position that both arguments have relevant points and that the allocation decision should not ignore any of the relevant criteria. However,

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[3] Report of the Study Group on the Creation of Reserve Assets, p. 58.

[4] Ibid., p. 59.

[5] Ibid.

the analysis in this paper is directed only to discovering how the efficiency of the international money system would probably be affected by the direct allocation of S.D.R.'s to the underdeveloped countries. While stressing that this is not the only relevant criteria for the allocation decision, it is pointed out that the achievement of a more efficient international monetary system is a significant and desirable objective given the overall goal of a more efficient allocation of world resources.

Suppose the underdeveloped countries would use their direct allocations of S.D.R.'s to add to their stocks of international reserves and would fully reconstitute any losses in due course. If this were the case, the direct allocation of S.D.R.'s to the underdeveloped countries would tend not to lessen, but increase the efficiency of the international monetary system provided that an overall increase in international liquidity is desirable. On the other hand, the underdeveloped countries might use their direct allocations of S.D.R.'s as a means of transferring real resources from developed countries to themselves on a permanent basis. Such behavior would tend to reduce the efficiency of the international monetary system in that it would tend to result in (1) additional restrictions on international trade and foreign exchange transactions, (2) additional inflationary pressures on price levels in the developed and underdeveloped countries, and (3) the S.D.R.'s becoming a less desirable form in

which to hold international reserves relative to gold or key currencies and subsequent attempts by monetary authorities to minimize the proportion of their international reserves which are held in the form of S.D.R.'s.

It is, of course, impossible to predict with complete accuracy what the underdeveloped countries would do with direct allocations of S.D.R.'s. However, an examination of their past behavior reveals that, relative to the developed countries, the underdeveloped countries have assigned what appear to be significantly lower priorities to the accumulation of international reserves. The rational reason for accumulating international reserves is to enable a country to finance deficits in its balance of payments; and, of course, the larger a country's holdings of reserves the better it is prepared to meet reserve losses resulting from such deficits. It therefore seems reasonable that a comparison of previous reserve holdings to previous reserve losses would indicate the degree to which a country has, in the past, prepared itself for such losses. Furthermore, a comparison of present reserve holdings to past losses would seem to indicate how well a country is now prepared to meet reserve losses of similar magnitudes to those which it has incurred in the past.

When reserve holdings were compared to reserve losses for both developed and underdeveloped countries, definite differences in the behavior patterns of the two

groups of countries were revealed. Every comparison revealed, with very few exceptions, that the developed countries held stocks of reserves relative to their major losses which were much larger than the reserve stocks held by the underdeveloped countries relative to their major past losses. In fact, the underdeveloped countries rarely accumulated international reserves amounting to more than twice their major past losses.

A supplementary analysis of the previous use made of the International Monetary Fund's drawing facilities revealed that many underdeveloped countries have made such prolonged and extensive use of their drawing rights as to transform this source of supposedly short-term credit into a source of long-term, if not permanent, aid. On the other hand, the developed countries, with the possible exception of Great Britain, have used their drawing rights only as a source of short-term credit.

In summary, this investigation revealed that in the past the underdeveloped countries have placed far less emphasis on the accumulation of international reserves than on other economic goals relative to the developed countries. If these past behavior patterns can be extrapolated into the future, they would seem to indicate that a major portion of the underdeveloped countries would be likely to use direct allocations of S.D.R.'s as a source of long-term aid. It can, of course, be argued that long-term development aid should be intentionally provided to

the underdeveloped countries along with a direct allocation of S.D.R.'s so that the pressure on the underdeveloped countries to use their reserves for development purposes will be lessened. This may be desirable, and if the volume of aid were large enough, a significant parameter would be altered and so, perhaps, would the conclusion of this paper. However, the existing proposal to create special drawing rights does not provide for large amounts of long-term aid. It is, therefore, the conclusion of this paper that direct allocations of S.D.R.'s would tend to lessen the efficiency of the international monetary system.

BIBLIOGRAPHY

Public Documents

Bank Holiday, March 6-9, 1933, Inclusive. Proclamation No. 2039. Statutes at Large. Vol. XLVIII, Part II.

Bernstein, Edward M. "The Problem of International Monetary Reserves," International Payments Imbalances and Need for Strengthening International Financial Arrangements. Hearings before the Subcommittee on International Exchange and Payments. Joint Economic Committee. 87th Cong., 1st Sess., May, 1961.

_____. "The U.S. Balance of Payments and International Liquidity," Statement in Guidelines for International Monetary Reform. Hearings before the Subcommittee on International Exchange and Payments of the Joint Economic Committee. 89th Cong., 1st Sess., 1965.

Cassel, Gustav. Memorandum on the World's Monetary Problems. Prepared for the League of Nations. (XIII, 3). Brussels, 1920.

Conan, A. R. "The United States Balance of Payments in 1968," Statement in The United States Balance of Payments, Statements by Economists, Bankers, and Others on the Brookings Institution Study. Prepared for the Joint Economic Committee. 88th Cong., 1st Sess., 1963.

Deming, Frederick L. "Statement," in New Plan for International Monetary Reserves. Hearing before the Subcommittee on International Exchange and Payments of the Joint Economic Committee. 90th Cong., 1st Sess., September 14, 1967.

Directives for the Application of the Agreement for the Establishment of a European Payments Union, Decision of the Council of O.E.E.C. of 18th August 1954, as Amended up to 30th June 1954. Paris: Organization for European Economic Co-operation, June, 1954.

Directives for the Application of the European Monetary Agreement, Decision of the Council of the O.E.E.C. of 29th July 1955. Paris: Organization for European Economic Co-operation, 1955.

Economic Report of the President Together with the Annual Report of the Council of Economic Advisers. Washington: U.S. Government Printing Office, Transmitted to the Congress, February, 1968.

A European Payments Union and the Rules of Commercial Policy to be Followed by Member Countries. Paris: Organization for European Economic Co-operation, 1950.

"Executive Order 11387 Governing Certain Capital Transfers Abroad, January 1, 1968," Weekly Compilation of Presidential Documents. Vol. IV, No. 1, January 8, 1968.

The Federal Reserve Act (Approved December 23, 1913), as Amended to July 1, 1933. Washington, 1933.

The Federal Reserve Act (Approved December 23, 1913), as Amended to March 4, 1931. Washington, 1931.

Fowler, Henry H. "Statement," in New Plan for International Monetary Reserves. Hearing before the Subcommittee on International Exchange and Payments of the Joint Economic Committee. 90th Cong., 1st Sess., September 14, 1967.

Great Britain, Her Majesty's Treasury Committee on the Working of the Monetary System. "The Sterling Area," Principal Memoranda of Evidence. Vol. I, pars. 8, 9. August, 1959.

Great Britain. Laws, Statutes, etc. 1910-1936. Geo. V, Vols. XXI-XXII, c. 46 (1931).

_____. Parliamentary Papers. Cmd. 6437. April, 1943. "Proposals for an International Clearing Union." (Cited by Board of Governors of the Federal Reserve System. Federal Reserve Bulletin, Vol. XXIX, No. 6 (June, 1943).

_____. Parliamentary Papers. Cmd. 827. August, 1959. "Report of the Committee on the Working of the Monetary System (The Radcliffe Committee Report)."

_____. Parliamentary Papers. Cmd. 3897. June, 1931. "Report of the Committee on Finance and Industry."

_____. Parliamentary Papers. Cmd. 6708. 1945. "Financial Agreement Between the Governments of the United States and the United Kingdom."

_____. Parliamentary Papers. Cmd. 3920. 1931. "Report of the Committee on National Expenditure."

Halm, George N. "Fixed or Flexible Exchange Rates," Factors Affecting the United States Balance of Payments. Joint Economic Committee. 87th Cong., 2d Sess., 1962.

International Monetary Fund. "Decision No. 1238-(61/43)," Selected Decisions of the Executive Directors. 2d ed. Washington: International Monetary Fund, September, 1963.

_____. "Executive Board Decision No. 102-(52/11), February 13, 1952," Selected Decisions of the Executive Directors. 2d ed. Washington: International Monetary Fund, September, 1963.

_____. "Executive Board Decision No. 1289-(61/1)," Selected Decisions of the Executive Directors and Selected Documents. 3d ed. Washington: International Monetary Fund, January, 1965.

_____. "Executive Board Decisions on Stand-By Arrangements," Selected Decisions of the Executive Directors. 2d ed. Washington: International Monetary Fund, September, 1963.

_____. "Pursuant to Executive Board Decision No. 71-2, September 26, 1946," Selected Decisions of the Executive Directors. 2d ed. Washington: International Monetary Fund, September, 1963.

_____. Selected Documents, Board of Governors Inaugural Meeting, Savannah, Ga., March 8 to 18, 1946. Washington: International Monetary Fund, April, 1946.

Kindleberger, Charles P. "Statement," in Balance of Payments--1965. Hearings before a Subcommittee of the Committee on Banking and Currency. 89th Cong., 1st Sess., Part 1, 1965.

League of Nations. International Financial Conference. Proceedings of the Conference. Vol. I. Brussels, 1920.

_____. Report of the Gold Delegation of the Financial Committee (II.A.12). Geneva, 1932.

_____. Secretariat. Currencies after the War. London: Harrison & Sons, Ltd., 1920.

_____. Secretariat. International Currency Experience (II.A.4, 1944).

Machlup, Fritz. "Proposals for Reform of the International Monetary System," Factors Affecting the United States Balance of Payments. Compilation of Studies Prepared for the Subcommittee on International Exchange and Payments of the Joint Economic Committee. Joint Committee Print. 87th Cong., 2d Sess., 1962.

Mlynarski, Feliks. The Functioning of the Gold Standard. A Memorandum Submitted to the Gold Delegation of the Financial Committee, League of Nations. Geneva, 1931.

Mundell, Robert. "The International Monetary System: Functioning and Possible Reform," The United States Balance of Payments. Hearings before the Joint Economic Committee. 88th Cong., 1st Sess., Part 3, November, 1963.

Organization for European Economic Co-operation, Memorandum of the Secretary-General. Prolongation of the European Payments Union to 30th June 1956 and Adoption of a European Monetary Agreement. Paris: Organization for European Economic Co-operation, August, 1955.

Pantaleoni, M. Memorandum Prepared for the International Financial Conference at Brussels. For the League of Nations (XIII, 6). Brussels, 1920.

Pigou, A. C. Memorandum on Credit, Currency, and Exchange Fluctuations. Prepared for the League of Nations (XIII, 4). Brussels, 1920.

Pollack, Gerald A. "Perspectives on the United States International Financial Position," The United States Balance of Payments--Perspectives and Policies. Joint Economic Committee. 88th Cong., 1st Sess., 1963.

Smith, Warren L. "Statement," in Guidelines for International Monetary Reform. Hearings before the Subcommittee on International Exchange and Payments of the Joint Economic Committee. 89th Cong., 1st Sess., Part 1, July 27, 28, and 29, 1965.

Staff Papers Presented to the Commission on Foreign Economic Policy (The Randall Commission). Washington: U.S. Government Printing Office, February, 1954.

"Treaty Establishing the European Economic Community, Rome, March 25, 1957," Treaty Series. Vol. CCXCVIII, No. 4300, Title II, chap. 2. United Nations, 1958.

Trued, Merlyn N. "Excerpts from Speech of Merlyn N. Trued, Assistant Secretary of the Treasury for International Affairs, June 16, 1965," Reprinted in Guidelines for International Monetary Reform. Hearings before the Subcommittee on International Exchange and Payments of the Joint Economic Committee. 89th Cong., 1st Sess., 1965.

U.S. Code. Vol. XII, 95a.

U.S. Congress. New Plan for International Monetary Reserves. Hearing before the Subcommittee on International Exchange and Payments of the Joint Economic Committee. 90th Cong., 1st Sess., Part 1, September 14, 1967 and Part 2, November 22, 1967.

U.S. Congress, Senate, Committee on Foreign Relations. Hearings, Bretton Woods Agreements Act Amendment. 87th Cong., 2d Sess. on H.R. 10162, March 30 and April 3, 1962.

U.S. Congress, Subcommittee on International Exchange and Payments of the Joint Economic Committee. Guidelines for Improving the International Monetary System. Joint Committee Print. 89th Cong., 1st Sess., 1965.

U.S. Department of State. International Organization and Conference Series 1, 3. Proceedings and Documents of the United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 1-22, 1944. Department of State Publication No. 2866. Vols. I-II, 1948.

_____. International Organization and Conference Series 55. United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 1 to July 22, 1944, Final Act and Related Documents. Department of State Publication No. 2187, art. IV, sec. 8, 1944.

U.S. President (L. B. Johnson). Economic Report of the President Together With the Annual Report of the Council of Economic Advisers. 1966.

_____. "Reviewing the International Balance of Payments and Our Gold Position," Message from the President of the United States Relative to Review of International Balance of Payments and Our Gold Position. 89th Cong., 1st Sess., February 10, 1965, House Doc. 83.

U.S. President (F. D. Roosevelt). Order Forbidding Hoarding of Gold Coin, Gold Bullion, and Gold Certificates, April 5, 1933. Executive Order No. 6102.

U.S. President (Kennedy). Message from the President Relative to U.S. Balance of Payments and the Gold Outflow from the United States. 87th Cong., 1st Sess., February 6, 1961, House Doc. 84.

U.S. President (Truman). Proclamation No. 2914, December 16, 1950, Proclaiming the Existence of a National Emergency. 1950.

U.S. Statutes at Large. Vol. LXXVIII.

U.S. Statutes at Large. Vol. LXXIX.

U.S. Statutes at Large. Vol. LXXX.

U.S. Statutes at Large. Vol. XLVIII, Part 1, Part 2.

U.S. Treasury Department. Articles of Agreement: International Monetary Fund and International Bank for Reconstruction and Development, United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 1 to 22, 1944.

_____. The Bretton Woods Proposals. February 15, 1945.

_____. Maintaining the Strength of the United States Dollar in a Strong Free World Economy. January, 1968.

_____. Preliminary Draft Outline of a Proposal for a Bank for Reconstruction and Development of the United and Associated Nations. November 24, 1943.

_____. Preliminary Draft Outline of a Proposal for an International Stabilization Fund of the United and Associated Nations. April 7, 1943. Reprinted by Board of Governors of the Federal Reserve System. Federal Reserve Bulletin, Vol. XXIX, No. 6 (June, 1943).

_____. Preliminary Draft Outline of a Proposal for an International Stabilization Fund of the United and Associated Nations. Revised July 10, 1943.

_____. Preliminary Draft Proposal for a Stabilization Fund of the United and Associated Nations. April 7, 1943.

_____. Preliminary Draft Proposal for United Nations Stabilization Fund and a Bank for Reconstruction and Development. March, 1942.

_____. Proposal for a Stabilization Fund of the United and Associated Nations. December, 1941.

United Nations. Conference on Trade and Development. International Monetary Issues and the Developing Countries. Report of the Group of Experts on International Monetary Issues (TD/B/32; TD/B/C.3/6). New York, 1965.

_____. General Assembly Resolution 1710, 16th Sess. Vol. I, Supplement No. 17, par. 1, September 19, 1961-February 23, 1962. New York, 1962.

_____. Proceedings of the United Nations Conference on Trade and Development. Final Act and Report (E/CONF.46/141, Vol. I). New York, 1964.

_____. Secretary-General. "The Adequacy of Reserves of Developing Countries in the Postwar Period: Note by the Secretary-General of UNCTAD," Doc. TD/B/34, November 10, 1965, contained in Annexes of the Official Records of the United Nations Conference on Trade and Development, Trade and Development Board. 3d Sess. January 25 to February 17, 1966. New York, 1966.

_____. Trade and Development Board. United Nations Conference on Trade and Development. "Continuation of the Discussion on Item 9 of the Agenda of the First Part of the First Session (Consideration of the Report of the Group of Experts on International Monetary Issues) [TD/B/32]," Report of the Committee on Invisibles and Financing Related to Trade on Its Special Session 27 January - 4 February 1966. Official Records 3d Sess., Supplement No. 4 (TD/B/57/Rev.1 and TD/B/C.3/18/Rev.1). Geneva, 1966.

Vanek, Jaroslav. "Overvaluation of the Dollar: Causes, Effects, and Remedies," Factors Affecting the United States Balance of Payments. Joint Economic Committee. 87th Cong., 2d Sess., 1962.

Wallich, Henry C. "Statement," in Guidelines for International Monetary Reform. Hearings before the Subcommittee on International Exchange and Payments of the Joint Economic Committee. 89th Cong., 1st Sess., Part 1, July 27, 28, and 29, 1965.

Weekly Compilation of Presidential Documents. Vol. IV, No. 1 (January 8, 1968).

Willis, George H., and Springborn, Fred L. The Need for International Reserves. Washington: U.S. Treasury Department, September, 1967.

Books

Aliber, Robert Z. The Future of the Dollar as an International Currency. New York: Frederick A. Praeger, 1966.

Aufricht, Hans. The International Monetary Fund: Legal Bases, Structure, Functions. New York: Frederick A. Praeger, 1964.

Bareau, Paul Louis Jean. The Future of the Sterling System. London: Institute of Economic Affairs, 1958.

Bell, Philip. The Sterling Area in the Postwar World. Oxford: Clarendon Press, 1956.

Boulding, Kenneth E. The Economics of Peace. New York: Prentice Hall, 1946.

Brown, William Adams, Jr. England and the New Gold Standard 1919-1926. New Haven: Yale University Press, 1929.

_____. The International Gold Standard Reinterpreted, 1914-1934. Vols. I-II, No. 37. New York: National Bureau of Economic Research, Inc., 1940.

Cassel, Gustav. The Downfall of the Gold Standard. Oxford: Clarendon Press, 1936.

_____. Money and Foreign Exchange After 1914. New York: Macmillan Co., 1922.

_____. Post-War Monetary Stabilization. New York: Columbia University Press, 1928.

Cassell, Francis. Gold or Credit? New York: Frederick A. Praeger, 1965.

Chandler, Lester V. The Economics of Money and Banking. 4th ed. New York: Harper & Row, 1964.

Child, Frank C. The Theory and Practice of Exchange Control in Germany. The Hague: Martinus Nijhoff, 1958.

Conan, A. R. The Problem of Sterling. London: Macmillan, 1966.

_____. The Rationale of the Sterling Area. London: Macmillan & Co., 1961.

Day, A. C. L. The Future of Sterling. London: Oxford University Press, 1954.

Donaldson, John. The Dollar: A Study of the "New" National and International Monetary System. London: Oxford University Press, 1937.

Duesenberry, J. S. Income, Savings, and the Theory of Consumer Behavior. Cambridge: Harvard University Press, 1949.

Einzig, Paul. Monetary Reform in Theory and Practice. New York: Macmillan Co., 1936.

_____. World Finance 1914-1935. New York: Macmillan Co., 1935.

_____. World Finance 1935-1937. New York: Macmillan Co., 1937.

Ellsworth, P. T. The International Economy. 3d ed. New York: Macmillan Co., 1964.

Feavearyear, Albert E. The Pound Sterling: A History of English Money. 2d ed. revised by E. Victor Morgan. London: Oxford University Press, 1963.

Ford, A. G. The Gold Standard 1880-1914: Britain and Argentina. Oxford: Clarendon Press, 1962.

Friedman, Milton, and Schwartz, Anna Jacobson. A Monetary History of the United States 1867-1960. Princeton: Princeton University Press, 1963.

Graham, Anila. International Liquidity and the Developing World. London: Economic and Development Research, Ltd., 1965.

Graham, Frank D., and Whittlesey, Charles R. Golden Avalanche. Princeton: Princeton University Press, 1939.

Halm, George N. International Monetary Cooperation. Chapel Hill, N. C.: University of North Carolina Press, 1945.

Hansen, Alvin H. America's Role in the World Economy. New York: W. W. Norton & Co., Inc., 1945.

Harris, Seymour E. John Maynard Keynes. New York: Charles Scribner's Sons, 1955.

Harrod, Roy. "The Dollar Problem and the Gold Question," The Dollar in Crisis. Edited by Seymour E. Harris. New York: Harcourt, Brace & World, Inc., 1961.

_____. Reforming the World's Money. New York: St. Martins Press, 1965.

Hawtrey, R. G. The Gold Standard in Theory and Practice. 3d ed. London: Longmans, Green & Co., 1933.

_____. Monetary Reconstruction. 2d ed. London: Longmans, Green & Co., 1926.

_____. The Pound at Home and Abroad. London: Longmans, Green & Co., Ltd., 1961.

_____. Towards the Rescue of Sterling. London: Longmans, Green, 1954.

Henning, Charles N. International Finance. New York: Harper & Bros., 1958.

Hoffmeyer, Erik. Dollar Shortage and the Structure of U.S. Foreign Trade. Copenhagen: Ejnar Munksgaard, 1958.

Hoover, Herbert. The Memoirs of Herbert Hoover: The Great Depression 1929-1941. New York: Macmillan Co., 1952.

Horie, Shigeo. The International Monetary Fund, Retrospect and Prospect. New York: St. Martin's Press, 1964.

Jacobsson, Per. International Monetary Problems 1957-1963. Washington: International Monetary Fund, 1964.

_____. "The Monetary Background of International Financing," International Financing and Investment. Edited by John F. McDaniels. Dobbs Ferry, N. Y.: Oceana Publications, Inc., 1964.

Kemmerer, Edwin W. Gold and the Gold Standard. New York: McGraw-Hill Book Co., Inc., 1944.

Kenen, Peter B. British Monetary Policy and the Balance of Payments 1951-1957. Cambridge: Harvard University Press, 1960.

Kindleberger, Charles P. The Dollar Shortage. New York: The Technology Press of M.I.T. & John Wiley & Sons, Inc., 1950.

MacDougall, Donald. The World Dollar Problem. London: Macmillan, 1957.

Machlup, Fritz. International Payments, Debts, and Gold. New York: Charles Scribner's Sons, 1964.

Meade, J. E. The Atlantic Community and the Dollar Gap. London: Friends of the Atlantic Union, 1954.

_____. "The Balance of Payments," The Theory of International Economic Policy. Vol. I. London: Oxford University Press, 1951.

Mikesell, Raymond F. Foreign Exchange in the Postwar World. New York: Twentieth Century Fund, 1954.

Mills, John Saxon. The Genoa Conference. New York: E. P. Dutton & Co., 1922.

Modigliani, Franco. "Fluctuations in the Savings-Income Ratio: A Problem in Economic Forecasting," Studies in Income and Wealth. Vol. XI. New York: National Bureau of Economic Research, 1949.

Morton, Walter A. British Finance 1930-1940. Madison, Wis.: University of Wisconsin Press, 1943.

Mundell, Robert A. The International Monetary System: Conflict and Reform. Montreal, Canada: Private Planning Association of Canada, 1965.

Nurkse, Ragnar. Problems of Capital Formation in Underdeveloped Countries. New York: Oxford University Press, 1953.

Robertson, Dennis H. Britain in the World Economy. London: George Allen & Unwin, 1954.

_____. "How Do We Want Gold to Behave?" The International Gold Problem. A Record of the Discussions of a Study Group of Members of the Royal Institute of International Affairs 1929-1931. London: Oxford University Press, 1932.

Rolfe, Sidney E. Gold and World Power. New York: Harper & Row, 1966.

Scammell, W. M. International Monetary Policy. London: Macmillan, 1957.

Schumacher, H. "Germany's Present Currency System," The Lessons of Monetary Experience. Edited by A. D. Gayer. New York: Farrar & Rinehart, 1937.

Shepherd, Henry L. The Monetary Experience of Belgium, 1914-1936. Princeton: Princeton University Press, 1936.

Shields, Murray (ed.). International Financial Stabilization. New York: Irving Trust Co., 1944.

Stolper, Gustav. The German Economy 1870-1940. New York: Reynal & Hitchcock, 1940.

_____. The German Economy 1870 to the Present. Translated by Toni Stopler. New York: Harcourt, Brace & World, 1967.

Studenski, Paul, and Krooss, Herman E. Financial History of the United States. 2d ed. New York: McGraw-Hill Book Co., Inc., 1963.

Tew, Brian. International Monetary Co-Operation, 1945-63. 7th ed. London: Hutchinson & Co., 1963.

Thomas, Brinley. Monetary Policy and Crises: A Study of Swedish Experience. London: George Routledge & Sons, Ltd., 1937.

Traynor, Dean E. "International Monetary and Financial Conferences in the Interwar Period," Studies in Economics. Vol. XXIII (published dissertation, The Catholic University of America.) Washington: The Catholic University of America Press, 1949.

Triffin, Robert. Europe and the Money Muddle. New Haven: Yale University Press, 1957.

_____. Gold and the Dollar Crisis. Rev. ed. New Haven: Yale University Press, 1961.

_____. Our International Monetary System: Yesterday, Today, and Tomorrow. New York: Random House, 1968.

_____. The World Money Maze. New Haven: Yale University Press, 1966.

Whittlesey, Charles R. International Monetary Issues. New York: McGraw-Hill Book Co., Inc., 1937.

Wicker, Elmus R. Federal Reserve Monetary Policy 1917-1933. New York: Random House, 1966.

Williams, John H. Postwar Monetary Plans and Other Essays. 3d ed. New York: Alfred A. Knopf, 1947.

Yeager, Leland B. International Monetary Relations, Theory, History, and Policy. New York: Harper & Row, 1966.

Young, John Parke. The International Economy. 4th ed. New York: Ronald Press Co., 1963.

Zuppnick, Elliot. Britains Postwar Dollar Problem. New York: Columbia University Press, 1957.

Articles and Periodicals

Acheson, Dean. "The Bretton Woods Proposals as Part of Postwar Organization," Department of State Bulletin, XII, No. 297 (February 28, 1945), 352.

"The Adequacy of Monetary Reserves," International Monetary Fund Staff Papers, III, No. 2 (October, 1953), 181-227.

Altman, Oscar L. "Fund Quotas Will be Increased to $21 Billion," The Fund and Bank Review: Finance and Development, II, No. 4 (December, 1965), 205-16.

_____. "A Note on Gold Production and Additions to International Gold Reserves," International Monetary Fund Staff Papers, VI (April, 1958), 258-88.

_____. "Professor Triffin on International Liquidity and the Role of the Fund," International Monetary Fund Staff Papers, VIII, No. 2 (May, 1961), 164.

Amuzegar, J. "International Liquidity: Meaning and Significance for the Haves and Have-Nots," The Indian Economic Journal, XIV, No. 3 (October-December, 1966), 338-52.

Angell, James W. "The Reorganization of the International Monetary System: An Alternative Proposal," The Economic Journal, LXXI (December, 1961), 691-708.

Bernstein, Edward M. "A Practical Monetary Policy," American Economic Review, XXXIV, No. 4 (December, 1944), 771-84.

Board of Governors of the Federal Reserve System. Federal Reserve Bulletin, XVIII, No. 3 (March, 1932), 167.

_____. Federal Reserve Bulletin, LIV, No. 3 (March, 1968), A-74.

_____. "Revised Guidelines for Banks and Nonbank Financial Institutions," Federal Reserve Bulletin, LIV, No. 3 (March, 1968), 257-65.

"Communiqué Issued after the Ministerial Meeting of the Group of Ten, March 29-30, 1968, in Stockholm," reprinted in "International Monetary System," International Financial News Survey, XX, No. 13 (April 5, 1968), 1.

Condliffe, J. B., Halm, George N., Harris, Seymour E., Haberler, Gottfried, Hansen, Alvin H., and Lachmann, L. M. "A Symposium on the International Monetary Fund and International Bank for Reconstruction and Development Proposed at Bretton Woods," Review of Economic Statistics, XXVI, No. 4 (November, 1944), 165-93.

Coombs, Charles A. "Treasury and Federal Reserve Foreign Exchange Operations," Federal Reserve Bulletin, LIV, No. 3 (March, 1968), 267-88.

_____. "Treasury and Federal Reserve Foreign Exchange Operations and the Gold Pool," Federal Reserve Bulletin, L, No. 3 (March, 1964), 294-307.

_____. "Treasury and Federal Foreign Exchange Operations and the Gold Pool," Monthly Review, Federal Reserve Bank of New York, XLVI, No. 3 (March, 1964), 47-56.

Coombs, Charles A., Iklé, M., Ranalli, E., and Tüngeler, J. "Conversations on International Finance," Monthly Review, Federal Reserve Bank of New York, XLV, No. 8 (August, 1963), 114-21.

De Vegh, Imré. "The International Clearing Union," American Economic Review," XXXIII, No. 3 (September, 1943), 534-56.

Federal Reserve Bank of Atlanta. "Central Bank Swaps--A Bulwark of International Monetary Cooperation," Monthly Review, December, 1967, pp. 162-67.

_____. "Gold Policy Communiqué," Monthly Review, April, 1968, p. 51.

First National City Bank of New York. "General Business Conditions," Monthly Economic Letter, December, 1967, pp. 133-36.

_____. "New Perspectives on Gold," Monthly Economic Letter, April, 1968, pp. 39-42.

_____. "Sterling Devaluation and Its Aftermath," Monthly Economic Letter, December, 1967, pp. 136-38.

"Gold Trading is Halted in London for Today: Federal Reserve Lifts Discount Rate to 5%," The Wall Street Journal, March 15, 1968, p. 3.

Goldenweiser, E. A., and Bourneuf, Alice. "Bretton Woods Agreements," Federal Reserve Bulletin, XXX, No. 9 (September, 1944), 850-70.

Harrod, Roy. "Imbalance of International Payments," International Monetary Fund Staff Papers, III (April, 1953), 1-46.

Hawkins, Robert C., and Rolfe, Sidney E. "A Critical Survey of Plans for International Monetary Reform," The Bulletin, No. 36 (November, 1965).

Høst-Madsen, Poul. "Asymmetries Between Balance of Payments Surpluses and Deficits," International Monetary Fund Staff Papers, IX, No. 2 (July, 1962), 182-99.

_____. "Balance of Payments Problems of Developing Countries," The Fund and Bank Review: Finance and Development, IV, No. 2 (June, 1967), 118-24.

International Monetary Fund. International Financial Statistics, 1952-1968.

_____. International Financial Statistics, XXI, No. 6 (June, 1968), 14.

_____. International Financial Statistics, Supplement to 1966/1967 Issues, 1967.

_____. "International Monetary System," International Financial News Survey, XX, No. 13 (April, 1968), 105.

International Monetary Fund and the International Bank for Reconstruction and Development. "Introduction to the Fund," The Fund and Bank Review: Finance and Development, I, No. 1 (June, 1964), 8.

Katz, S. I. "Sterling Instability and the Postwar Sterling System," Review of Economics and Statistics, XXXVI (February, 1954), 81-87.

Keynes, John Maynard. "The Objectives of International Price Stability," The Economic Journal, LIII, No. 210 (June-September, 1943), 185-87.

Kindleberger, Charles P. "The Dollar Shortage Revisited," American Economic Review, XLVIII (June, 1958), 388-95.

Machlup, Fritz. "Three Concepts of the Balance of Payments and the So-Called Dollar Shortage," The Economic Journal, LX (March, 1950), 46-68.

"Message of the President to Congress: The Bretton Woods Proposals, International Monetary Fund and International Bank for Reconstruction and Development," Department of State Bulletin, XII, No. 295 (February 12, 1945), 220-22.

Midesell, Raymond F. "Dollar Shortage: A Modern Myth," Journal of Political Economy, LXVII (June, 1959), 307-309.

Morgenthau, Henry, Jr. "Bretton Woods and International Cooperation," Foreign Affairs, XXIII, No. 2 (January, 1945), 182-94.

Nicoletopoulous, George. "Stand-By Arrangements," The Fund and Bank Review: Finance and Development, I, No. 3 (December, 1964), 192-97.

"Paper Gold Wins in Its Latest Bout," Business Week, No. 2014 (April 6, 1968), pp. 47-49.

Rasminsky, Louis. "International Credit and Currency Plans," Foreign Affairs, XXII, No. 4 (July, 1944), 589-603.

Robertson, Dennis H. "The Postwar Monetary Plans," The Economic Journal, LIII, No. 212 (December, 1943), 352-60.

Robertson, Joan. "The International Currency Proposals," The Economic Journal, LIII, No. 210 (June-September, 1943), 161-75.

Rosenstein-Rodan, P. N. "International Aid for Underdeveloped Countries," The Review of Economics and Statistics, XLIII, No. 2 (May, 1961), 107-38.

Samuelson, Paul A. "Bretton Woods, Pro and Con," The New Republic, CXII, No. 15 (April 9, 1945), 467-69.

Schweitzer, Pierre-Paul. "Proposed Amendment of Fund's Articles of Agreement," International Financial News Survey, XX, No. 17 (May, 1968), 137-39.

Stamp, Maxwell, "The Fund and the Future," Lloyds Bank Review, New Series No. 50 (October, 1958), pp. 1-20.

"Text of Statement by Governors of Central Banks," The Weekly Bond Buyer, CLXXI, No. 3911 (March 25, 1968), 10.

United Nations. Monthly Bulletin of Statistics, May, 1968, pp. 102-107.

_____. "Special Features: World Trade: Index Numbers by Regions," normally contained in the January, April, July, and October issues only of Monthly Bulletin of Statistics, 1953-1968.

_____. Supplement to the Monthly Bulletin of Statistics: Definitions and Explanatory Notes, 1959, pp. 91-97.

_____. Supplement to the Monthly Bulletin of Statistics: Definitions and Explanatory Notes, 1963, pp. 115-20.

Viner, Jacob. "Two Plans for International Monetary Stabilization," The Yale Review, XXXIII, No. 1 (1943), 75-107.

White, Harry Dexter. "The Monetary Fund: Some Criticisms Examined," Foreign Affairs, XXIII, No. 2 (January, 1945), 194-210.

_____. "Postwar Currency Stabilization," American Economic Review, XXXIII, No. 1, Supplement Part II (March, 1943), 382-87.

Williams, John H. "Currency Stabilization: The Keynes and White Plans," Foreign Affairs (July, 1943), p. 650.

_____. "International Monetary Plans After Bretton Woods," Foreign Affairs, XXIII, No. 1 (October, 1944), 38-56.

Young, John Parke. "Conference at Bretton Woods Prepares Plans for International Finance," Department of State Bulletin, XI, No. 280 (November 5, 1944), 539-50.

_____. "Developing Plans for an International Monetary Fund and a World Bank," Department of State Bulletin, XXIII, No. 593 (November 13, 1950), 778-90.

Reports

Establishment of a Facility Based on Special Drawing Rights in the International Monetary Fund and Modifications in the Rules and Practices of the Fund. A Report by the Executive Directors to the Board of Governors Proposing Amendment of the Articles of Agreement. Washington: International Monetary Fund, April, 1968.

European Payments Union. Fifth Annual Report of the Managing Board, Financial Year 1954-55. Paris: Organization for European Economic Co-operation, 1955.

_____. First Annual Report of the Managing Board, 1st July 1950 - 30th June 1951. Paris: Organization for European Economic Co-operation, August, 1951.

International Monetary Fund. 1952 Annual Report of the International Monetary Fund. Washington: International Monetary Fund, 1952.

_____. 1958 Annual Report of the International Monetary Fund. Washington: International Monetary Fund, 1958.

_____. 1959 Annual Report of the International Monetary Fund. Washington: International Monetary Fund, 1959.

_____. 1960 Annual Report of the International Monetary Fund. Washington: International Monetary Fund, 1960.

_____. 1966 Annual Report of the International Monetary Fund. Washington: International Monetary Fund, 1966.

_____. 1967 Annual Report of the International Monetary Fund. Washington: International Monetary Fund, 1967.

_____. Enlargement of Fund Resources Through Increases in Quotas. A Report by the Executive Directors to the Board of Governors. Washington: International Monetary Fund, 1958.

_____. "Executive Board Decision No. 1289-(62/1), January 5, 1962," in 1962 Annual Report of the International Monetary Fund. Washington: International Monetary Fund, 1962.

_____. "International Liquidity and Reserve Creation," 1966 Annual Report of the International Monetary Fund. Washington: International Monetary Fund, 1966.

_____. International Reserves and Liquidity. A Study Prepared by the Staff of the International Monetary Fund. Washington: International Monetary Fund, 1958.

_____. Report of the Executive Directors and Summary Proceedings, September 27 to October 3, 1946, International Monetary Fund, First Annual Meeting of the Board of Governors. Washington: International Monetary Fund, November, 1946.

Jacobsson, Per. "Presentation of the Sixteenth Annual Report," Summary Proceedings of the Sixteenth Annual Meeting of the Board of Governors. Washington: International Monetary Fund, September, 1961.

Maudling, Reginald. "Statement," in Summary Proceedings of the Seventeenth Annual Meeting of the Board of Governors. Washington: International Monetary Fund, September, 1962.

Report of the Study Group on the Creation of Reserve Assets. Report to the Deputies of the Group of Ten. Rome, Italy: Bank of Italy Press, May 31, 1965.

Twentieth Annual Report of the Board of Governors of the Federal Reserve System for the Year 1933. Washington: U.S. Government Printing Office, 1934.

Twenty-Third Annual Report of the Board of Governors of the Federal Reserve System for the Year 1936. Washington: U.S. Government Printing Office, 1937.

Pamphlets and Essays

Anderson, Benjamin M. International Currency: Gold Versus Bancor or Unitas. An Address Delivered before the Chamber of Commerce of the Sate of New York, February 3, 1944. New York: Economists' National Committee on Monetary Policy, 1944.

_____. Postwar Stabilization of Foreign Exchange: The Keynes-Morgenthau Plan Condemned, Outline of a Fundamental Solution. New York: Economists' National Committee on Monetary Policy, 1943.

Bareau, Paul Louis Jean. The Sterling Area: What It Is and How It Works. ("British Commonwealth Affairs," No. 3.) London: Longmans, Green & Co., 1948.

Bloomfield, Arthur I. Monetary Policy Under the International Gold Standard: 1880-1914. New York: Federal Reserve Bank, 1959.

Fleming, J. Marcus. The International Monetary Fund, Its Form and Functions. Washington: International Monetary Fund, 1964.

_____. Toward Assessing the Need for International Reserves. ("Reprints in International Finance," No. 58.) Princeton: Princeton University Press, February, 1967.

Graham, Frank D. Fundamentals of International Monetary Policy. ("Essays in International Finance," No. 2.) Princeton: Princeton University Press, Autumn, 1943.

Haberler, Gottfried. Currency Convertibility. National Economic Problems No. 451. New York: American Enterprise Association, 1954.

Harrod, Roy. The Pound Sterling. ("Essays in International Finance," No. 13.) Princeton: Princeton University Press, 1952.

Heilperin, Michael A. International Monetary Reconstruction. National Economic Problems No. 407. New York: American Enterprise Assoc., 1945.

Hinshaw, Randall. Toward European Convertibility. ("Essays in International Finance," No. 31.) Princeton: Princeton University Press, November, 1958.

Kriz, Miroslav A. Gold: Barbarous Relic or Useful Instrument? ("Essays in International Finance," No. 60.) Princeton: Princeton University Press, June, 1967.

_____. Postwar International Lending. ("Essays in International Finance," No. 8.) Princeton: Princeton University Press, Spring, 1947.

Lutz, Friedrich A. International Monetary Mechanisms: The Keynes and White Proposals. ("Essays in International Finance," No. 1.) Princeton: Princeton University Press, July, 1943.

_____. The Problem of International Liquidity and the Multiple-Currency Standard. ("Essays in International Finance," No. 41.) Princeton: Princeton University Press, March, 1963.

MacDougall, Donald. The Dollar Problem: A Reappraisal. ("Essays in International Finance," No. 35.) Princeton: Princeton University Press, November, 1960.

Machlup, Fritz. The Cloakroom Rule of International Reserves: Reserve Creation and Resources Transfer. ("Reprints in International Finance," No. 1.) Princeton: Princeton University Press, August, 1965.

_____. Credit Facilities or Reserve Allotments. ("Reprints in International Finance," No. 7.) Princeton: Princeton University Press, September, 1967.

_____. From Dormant Liabilities to Dormant Assets. ("Reprints in International Finance," No. 8.) Princeton: Princeton University Press, October, 1967.

_____. The Need for Monetary Reserves. ("Reprints in International Finance," No. 5.) Princeton: Princeton University Press, October, 1966.

_____. Plans for Reform of the International Monetary System. ("Special Papers in International Economics," No. 3.) Princeton: Princeton University Press, August, 1962.

_____. World Monetary Debate--Bases for Agreement. ("Reprints in International Finance," No. 4.) Princeton: Princeton University Press, September, 1966.

Metzler, Lloyd A. "Exchange Rates and the International Monetary Fund," International Monetary Policies. Postwar Economic Studies No. 7. Washington: Board of Governors of the Federal Reserve System, September, 1947.

Nurkse, Ragnar. Conditions of International Monetary Equilibrium. ("Essays in International Finance," No. 4.) Princeton: Princeton University Press, Spring, 1945.

The Pound Sterling and Sterling Area After World War II. ("New York University Publications: Institute of International Finance Bulletin," No. 140.) New York: New York University Press, 1945.

Riddle, J. H. British and American Plans for International Currency Stabilization. Occasional Paper No. 16. New York: National Bureau of Economic Research, December, 1943.

Rueff, Jacques, and Hirsch, Fred. The Role and the Rule of Gold: An Argument. ("Essays in International Finance," No. 47.) Princeton: Princeton University Press, June, 1965.

Triffin, Robert. The Evolution of the International Monetary System: Historical Reappraisal and Future Perspectives. ("Princeton University Publications: Studies in International Finance," No. 12.) Princeton: Princeton University Press, 1964.

_____. The Future of the European Payments System. Wicksell Lectures. Stockholm: Wicksell Lecture Society, 1958.

_____. International Monetary Policies. Postwar Economic Studies No. 7. Washington: Board of Governors of the Federal Reserve System, September, 1947.

Weintraub, Sidney. The Foreign-Exchange Gap of the Developing Countries. ("Essays in International Finance," No. 48.) Princeton: Princeton University Press, September, 1965.

BIOGRAPHICAL SKETCH

Hugh Rhame Granade was born November 22, 1939, at Greer, South Carolina. In June, 1958, he graduated from Greer Senior High School. In June, 1962, he received the degree of Bachelor of Science from Furman University. From July, 1962, to August, 1964, he was employed as a research physicist at Deering Milliken Research Corporation. In September, 1964, he enrolled in the Graduate School of Business Administration of the University of Florida. He served as a teaching assistant and was also a Graduate School Fellow while at the University of Florida. In April, 1966, he received the Master of Arts degree from the University of Florida. In September, 1968, Mr. Granade accepted a position as Assistant Professor of Economics at the University of Tennessee.

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This dissertation was prepared under the direction of the chairman of the candidate's supervisory committee and has been approved by all members of that committee. It was submitted to the Dean of the College of Business Administration and to the Graduate Council, and was approved as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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